ALTO-SHAAM®

ELECTRIC FRYER

FryTech Series

ecosmart®

ASF-75E shown with basic control and optional automatic basket lifts

ASF-60E and ASF-75E Electric Fryers with Basic Control

- **INSTALLATION**
- **OPERATION**
- **MAINTENANCE**

FryTech™

24•7 Your Service Hotline 1-800-558-8744

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www.alto-shaam.com

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DELIVERY

This Alto-Shaam appliance has been thoroughly tested and inspected to ensure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. ***See Transportation Damage and Claims section located in this manual.***

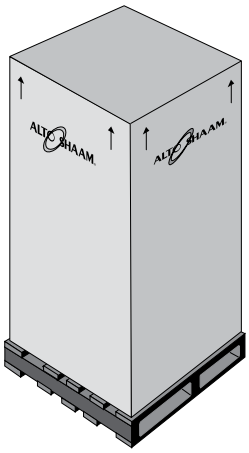
This appliance, complete with unattached items and accessories, may have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to ensure prompt service in the event of a warranty parts and labor claim.

This manual must be read and understood by all people using or installing the equipment model. Contact the Alto-Shaam Tech Team Service Department if you have any questions concerning installation, operation, or maintenance.

NOTE: All claims for warranty must include the full model number and serial number of the unit.

UNPACKING



1. Carefully remove the appliance from the carton or crate.

   NOTE: Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.

2. Read all instructions in this manual carefully before initiating the installation of this appliance.

   DO NOT DISCARD THIS MANUAL.
   This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. ***Additional manuals are available from the Alto-Shaam Tech Team Service Department.***

3. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.

KEEP THIS MANUAL IN A CONVENIENT LOCATION FOR REFERENCE.

INSTALLATION

SAFETY PROCEDURES AND PRECAUTIONS

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols may be used throughout this manual.

DANGER

Used to indicate the presence of a hazard that WILL cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.

WARNING

Used to indicate the presence of a hazard that CAN cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.

CAUTION

Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.

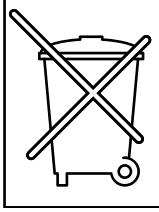
CAUTION

Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.

NOTE: Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.

1. This appliance is intended to cook, hold or process foods for the purpose of human consumption. No other use for this appliance is authorized or recommended.
2. This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

NOTE



For equipment delivered for use in any location regulated by the following directive:

DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.

ASF-75E SPECIFICATIONS

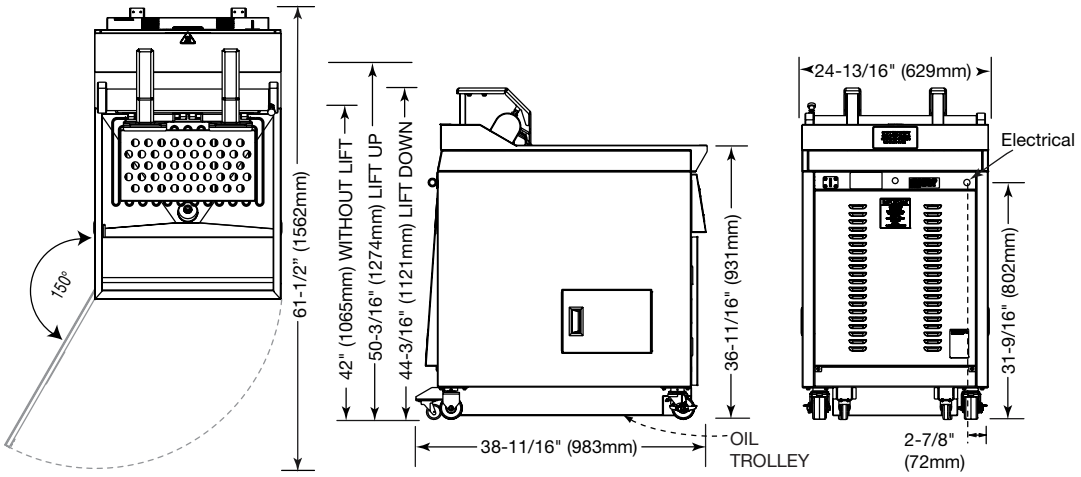
DIMENSIONS EXTERIOR (H X W X D)
ASF-75E WITHOUT LIFTS OR FILTRATION
41-15/16" x 24-13/16" x 37-7/16" (1065mm x 629mm x 950mm)
ASF-75E WITH LIFTS AND FILTRATION
44-3/16" x 24-13/16" x 38-11/16" (1121mm x 629mm x 983mm)
BASKET DIMENSIONS (H X W X D)
6" x 9-3/16" x 14-3/16" (152mm x 232mm x 337mm)

CAPACITY
SHORTENING/OIL:
73 lb (33 kg) MAXIMUM
LOAD CAPACITY:
13 lb (6 kg) MAXIMUM

WEIGHT EST.	NET WEIGHT	SHIP WEIGHT
	338 lb (154 kg)	460 lb (209 kg)
CARTON DIMENSIONS (L X W X H)	31" x 43" x 50" (787mm x 1092mm x 1270mm)	

STANDARD ACCESSORIES	
☐ Basket, Half-Size (2 INCLUDED AS STANDARD)	BS-27140
Brush Set (ONE 2-BRUSH SET INCLUDED AS STANDARD)	
☐ SCRUB BRUSH	BH-28693
☐ STRAIGHT BRUSH	BH-28691
Filter, Paper (7 PAPER FILTERS INCLUDED AS STANDARD)	
☐ **7 COUNT REFILL PACKAGE**	FI-27791
☐ **100 COUNT REFILL PACKAGE**	FI-27794

OPTIONS	
☐ Basket, Full-Size	BS-26998
FILTERS	
☐ Charcoal/Carbon (**30 COUNT PKG.**)	FI-27648
☐ Reusable Mesh (**SINGLE FILTER**)	FI-27014
☐ Fry Pot Cover	5005136
☐ Mobile Drawer Cover	5006073
☐ Strainer/Skimmer	CE-27400
☐ Oil Discard Hose	HO-27686
☐ Banking Strip (1 STRIP REQ'D FOR EVERY 2 BANKED FRYERS)	1009511
☐ Mobile Oil Caddy	TO-28359
☐ Pre-filter Sieve Kit (FOR OIL FILTRATION SYSTEM)	5010451



INSTALLATION

ASF-60E SPECIFICATIONS

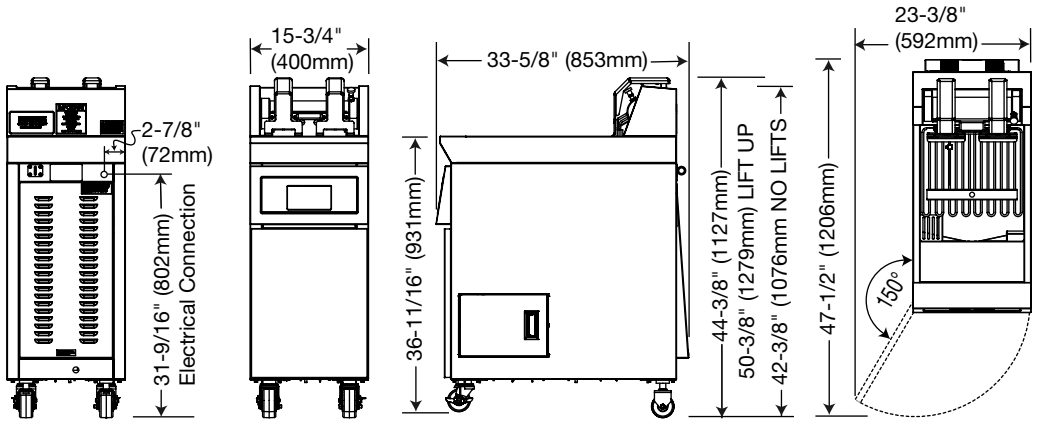
DIMENSIONS EXTERIOR (H X W X D)
44-3/8" x 15-3/4" x 33-5/8" (1127mm x 400mm x 854mm)
BASKET DIMENSIONS (H X W X D)
5-3/16" x 5-7/8" x 13-13/16" (131mm x 149mm x 351mm)

CAPACITY	
SHORTENING/OIL:	62 lb (28 kg) MAXIMUM
LOAD CAPACITY:	8 lb (4 kg) MAXIMUM

WEIGHT EST	**NET WEIGHT**	**SHIP WEIGHT**
	248 lb (113 kg)	330 lb (150 kg)
CARTON DIMENSIONS (L X W X H)	22" x 39" x 55" (559mm x 991mm x 1397mm)	

STANDARD ACCESSORIES	
☐ Basket, Half-Size (2 INCLUDED AS STANDARD)	BS-27963
Brush Set (ONE 2-BRUSH SET INCLUDED AS STANDARD)	
☐ SCRUB BRUSH	BH-28693
☐ STRAIGHT BRUSH	BH-28691

OPTIONS	
☐ Fry Pot Cover	5007596
☐ Strainer/Skimmer	CE-27400
☐ Banking Strip (1 STRIP REQ'D FOR EVERY 2 BANKED FRYERS)	1010991
☐ Mobile Oil Caddy	TO-28359



DANGER

IMPROPER INSTALLATION, ALTERATION, ADJUSTMENT, SERVICE, OR MAINTENANCE COULD RESULT IN SEVERE INJURY, DEATH, OR CAUSE PROPERTY DAMAGE.

READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

DANGER

AVERTISSEMENT : UNE INSTALLATION, UN AJUSTEMENT, UNE ALTÉRATION, UN SERVICE OU UN ENTRETIEN NON CONFORME AUX NORMES PEUT CAUSER DES DOMMAGES À LA PROPRIÉTÉ, DES BLESSURES OU LA MORT.

LIRE ATTENTIVEMENT LES DIRECTIVES D'OPÉRATION ET D'ENTRETIEN AVANT DE FAIRE L'INSTALLATION, OU L'ENTRETIEN DE CET ÉQUIPEMENT.

SITE INSTALLATION

NOTE: To avoid equipment damage, remove the Mobile Oil Trolley before moving this appliance with a forklift or pallet lift.

MINIMUM CLEARANCE REQUIREMENTS

	COMBUSTIBLE SURFACES	NON-COMBUSTIBLE SURFACES
RIGHT SIDE	0" (0mm)	0" (0mm)
LEFT SIDE	0" (0mm)	0" (0mm)
BACK	6" (152mm)	6" (152mm)
FRONT	25" (635mm)	

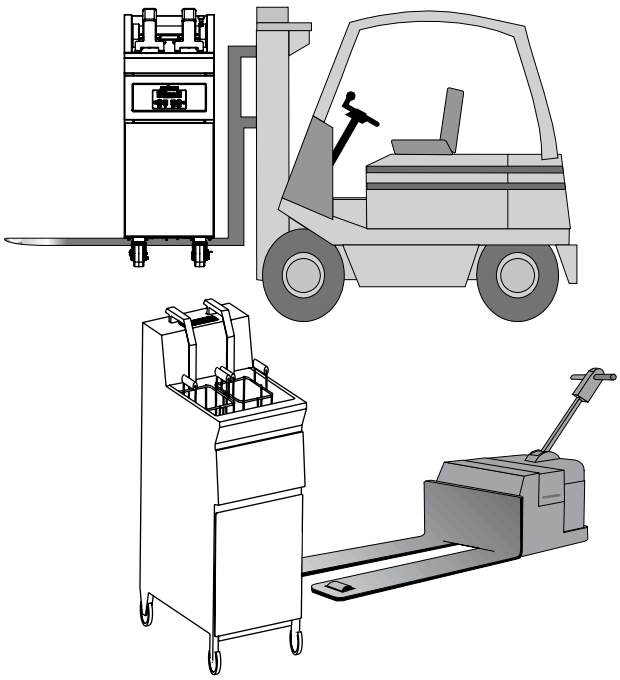
PLUS: 6" (152mm) minimum between the element swing in the extended position and the lower edge of the exhaust hood and filter media.

ENTRY CLEARANCE: 30" (762mm) UNCRATED

Ne pas installer à une distance inférirure à celle indiquée ce-dessous d'une parol en matiére combustible: Côtés 6 pouches, Arriére 6 pouches.

CAUTION

DO NOT USE FORKLIFT FROM FRONT OR REAR OF UNIT. USE FORKLIFT FROM SIDE ONLY.



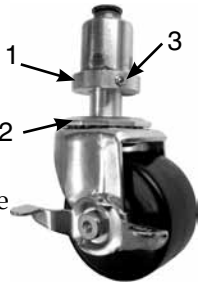
WARNING

MINIMUM CLEARANCES MUST REMAIN UNOBSTRUCTED. DO NOT place insulation or any other type of materials in clearance areas.

INSTALLATION

SITE INSTALLATION

1. It is the responsibility of the installer to verify that this fryer installation is in compliance with the specifications listed in this manual and with local code requirements.
2. Hood installation is required.
3. Both cooking and cleaning functions require unobstructed access. The frypot, control panel, and front access door must be maintained free from obstruction. The access door must be accessible for service and maintenance.
4. Locate the fryer on a firm, level surface ONLY. The area surrounding the fryer must be kept clear of all combustible materials.
5. **FOR YOUR SAFETY DO NOT** store or use any flammable liquids or allow flammable vapors in the vicinity of this fryer or any other appliance.
6. **FOR YOUR SAFETY DO NOT place insulation or any other type of materials in clearance areas.**
7. When properly installed, the electric fryer is designed for operation adjacent to non-combustible floors and walls with a 6" clearance at the back. Clearances from all combustible construction is a minimum of 6" (152mm) at the back and both sides. Concrete, tile, terrazzo, or metal surfaces are recommended. Metal over a combustible material may not meet code for non-combustible surfaces. Verify site selection with local codes for specific requirements.
   Doit être utilisé seulement sur des planchers non inflammables.
8. Adequate means must be provided to limit the movement of this appliance. A restraining device is required for field installation.
9. DO NOT install this fryer in any area where it may be affected by any adverse conditions such as steam or dripping water, etc. DO NOT install the fryer over a drain.
10. **LEVELING:** Make certain the fryer is positioned firmly on all four supporting casters. Level fryer front-to-back and side-to-side by holding lower collar (#2) while twisting upper collar (#1). Restraining ties can be used for stabilization if necessary. Use an allen wrench (#3) to lock caster in position.



DANGER

To avoid electrical shock, this appliance MUST be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/ NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.

WARNING

BURN WARNING: Make certain the fryer is stabilized before operation to prevent any movement or tipping and the possibility of severe burns caused by hot, splashing shortening or oil.

CAUTION

TO PREVENT PERSONAL INJURY, USE CAUTION WHEN MOVING OR LEVELING THIS APPLIANCE.

WARNING

IMPROPER INSTALLATION MAY RESULT IN FIRE.
Carefully read and follow all installation instructions located in this manual.

VENTILATION

⚠ DANGER

Installation, air ventilation requirements, and service work must be in accordance with all local codes and must be performed by a qualified service technician.

An adequate ventilation system is required for commercial cooking equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. When writing refer to NFPA No. 96.

⚠ DANGER

FAILURE TO VENT THIS FRYER PROPERLY MAY BE HAZARDOUS TO THE HEALTH OF THE OPERATOR.

Equipment damage and operational problems may also be the consequence of improper venting. Any damages sustained by a failure to properly vent this fryer are not covered under warranty.

Ventilating hoods and exhaust systems shall be permitted to be used to vent appliances installed in commercial applications.

Where automatically operated appliances are vented through a ventilating hood or exhaust system equipped with a damper or with a power means of exhaust, provisions shall be made to allow the flow of gas to the main burners only when the damper is open to a position to properly vent the appliance and when the power means of exhaust is in operation. IN ACCORDANCE WITH NFPA 54 COMMONWEALTH OF MASSACHUSETTS ONLY.

WARNING

This appliance shall be installed in conformity with the current regulations and used only in a well ventilated location. Consult the instructions before installing and using this appliance.

INSTALLATION

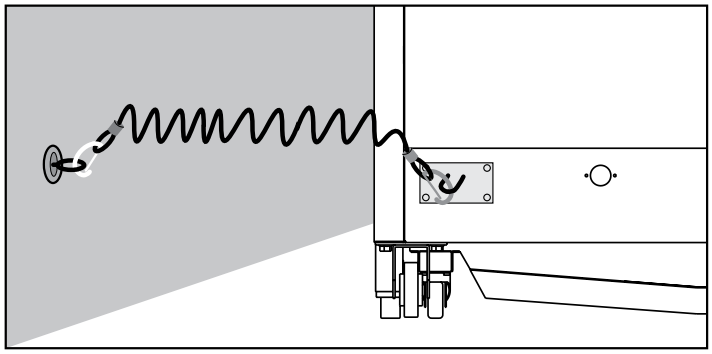
RESTRAINT REQUIREMENTS - MOBILE EQUIPMENT

The fryer must be supplied with a connector that complies with all state and local installation codes.

Any appliance that is not furnished with a power supply cord but that includes a set of casters must be tethered. Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. The following requirements apply:

1. Casters must be a maximum height of 4-inches (102mm).

2. Such mobile appliances must be installed with the use of a flexible connector secured to the building structure.



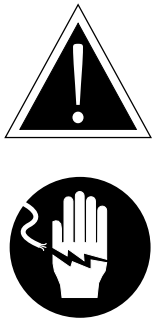
located on the lower back flange of the appliance chassis, approximately 7-inches (178mm) from the floor. A flexible connector is not supplied by nor is it available from the factory.

⚠ WARNING

RISK OF ELECTRIC SHOCK.

Appliance must be secured to building structure.

DANGER



To avoid electrical shock, this appliance MUST be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/ NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.

An electrical wiring diagram is located in the front access door of the fryer. The fryer must be installed by a qualified electrician. This appliance must be branch circuit protected with proper ampacities, in accordance with the wiring diagram located in the fryer. The fryer must be properly grounded in accordance with the National Electrical Code and applicable local codes. A means to disconnect the unit must be incorporated into the fixed wiring in accordance with wiring codes.

Wire size for the main incoming power to the unit must match the minimum size listed in the specifications applicable to the specific fryer. For supply connections, locate the wire size posted on the label located on the electrical control box cover, behind the service panel or elsewhere listed in this manual.

Before operating the fryer, check all cable connections in the electrical connection area for tightness since connections can loosen during transport.

⚠ DANGER

ENSURE POWER SOURCE MATCHES VOLTAGE STAMPED ON APPLIANCE NAMEPLATE.

230V:

To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances / metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol. ⏚

Hard wired models:

Hard wired models must be equipped with a country certified external allpole disconnection switch with sufficient contact separation.

If a power cord is used for the connection of the product an oil resistant cord like H05RN or H07RN or equivalent must be used.

DANGER

APPLIANCES WITH NO CORD PROVIDED BY FACTORY MUST BE EQUIPPED WITH A CORD OF SUFFICIENT LENGTH TO PERMIT THE APPLIANCE TO BE MOVED FOR CLEANING.

ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED SERVICE TECHNICIAN IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.

ELECTRICAL - ASF-60E

VOLTAGE	PHASE	CYCLE/HZ	AMPS	kW	AWG
208-220 (AGCY)	3	60	47.0	17.9	AWG 6
at 208	3	60	45.0	16.2	AWG 6
at 220	3	60	47.6	18.2	AWG 6
240 (AGCY)	3	60	43.0	17.9	AWG 6
380-415					
at 380	3	50	20.4	15.4	AWG 10
at 415	3	50	25.4	18.3	AWG 10
440-480 (AGCY)	3	60	21.8	18.1	AWG 10
at 440	3	60	20.4	15.5	AWG 10
at 480	3	60	22.2	18.5	AWG 10
No cord or plug					

ELECTRICAL - ASF-75E

VOLTAGE	PHASE	CYCLE/HZ	AMPS	kW	AWG
208-220(AGCY)	3	60	68.2	26.0	AWG 2
at 208	3	60	66.6	24.0	AWG 2
at 220	3	60	70.8	27.0	AWG 2
240 (AGCY)	3	60	66.8	27.8	AWG 2
380-415 (AGCY)	3	50	38.1	27.5	AWG 6
at 380	3	50	35.2	23.2	AWG 6
at 415	3	50	38.2	27.5	AWG 6
440-480 (AGCY)	3	60	31.3	26.0	AWG 8
at 440	3	60	30.7	23.5	AWG 8
at 480	3	60	33.4	27.9	AWG 8
No cord or plug					

INSTALLATION

ELECTRICAL INSTALLATION

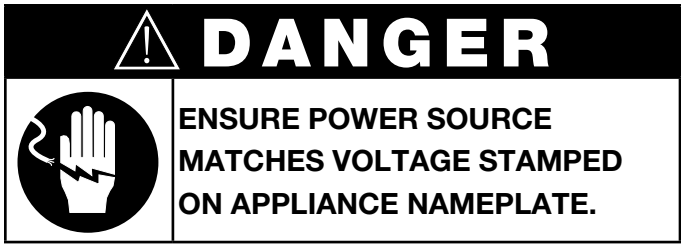
1. Refer to the nameplate on the FRONT of the fryer. Verify the electrical service power. Voltage and phase must match the nameplate specifications and available electrical service amperage must meet or exceed the specifications listed.

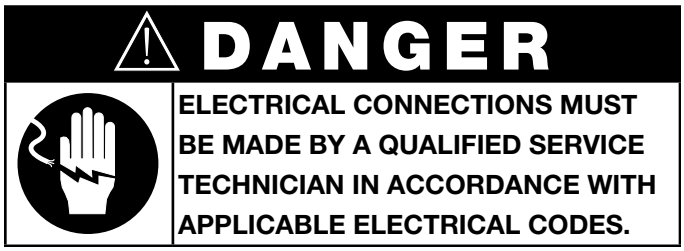
NOTE: Wire gauge, insulation type and temperature rating, as well as type, size and construction of conduit, must meet or exceed applicable specifications of local codes and of the National Electrical Code.

Warning!
440-480V - 3 Phase Only
The pump motor should **rotate clockwise** when viewed from the rear of the fryer.
To change rotation, swap any two lines of 3 Phase incoming power.

2. The fryer is shipped from the factory wired for 3-phase electrical service. ***This fryer is not approved for conversion to single phase. Converting to single phase will void the warranty and invalidate the ETL certification.***

IMPORTANT: Field wiring must be routed and secured away from the frypot, tubing, and filter pump and motor. Field wiring must allow access to the rear of the fryer for cleaning and for **access to the oil filter pump motor reset button**.




DANGER
ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED SERVICE TECHNICIAN IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.

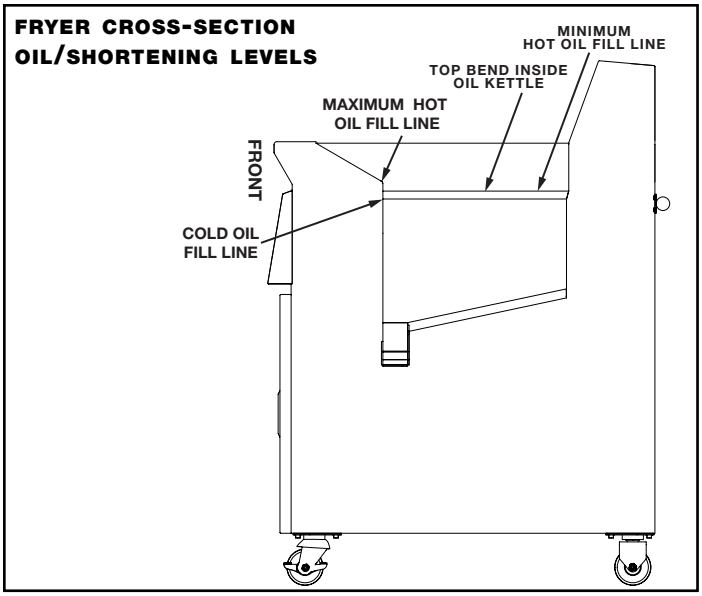
OIL/SHORTENING REQUIREMENTS

The ASF-75E requires 73-pounds (33 kg) of oil or shortening in the frypot and the ASF-60E requires 62-pounds (28 kg) of oil or shortening. Use only quality, high-grade oil/shortening in the fryer. The high moisture content of many lower grade shortening will result in excessive foaming and boil over. The cold oil/shortening level requirement for the fryer is indicated below.

CAUTION

Cold oil or shortening expands as the temperature increases. To avoid injury and equipment damage, allow for expansion by filling to the cold oil fill line.

NOTE: ALWAYS maintain the proper level of shortening by adding fresh oil/shortening to the frypot whenever needed.



WARNING

FAILURE TO PLACE SOLID SHORTENING DIRECTLY ON THE BOTTOM OF THE FRYPOT CAN CAUSE SERIOUS EQUIPMENT DAMAGE.

Check the quality of the oil/shortening in the frypot on a daily basis for signs of deterioration. Use an approved test kit. Signs of shortening deterioration include excessive boiling, smoking, foaming, bad taste, and rancid odor.

DANGER

FLASH POINT

The flash point of shortening occurs at a lower temperature the longer the shortening is used. Discard any shortening showing signs of deterioration to avoid serious burns, fire, and property damage.

Discard any shortening before it degrades to the point of affecting product quality. Always filter the oil on a regular basis and keep the frypot clean.

CAUTION

ENSURE THERE IS NO WATER IN THE FRYPOT BEFORE FILLING WITH OIL/SHORTENING. WHEN COOKING COMPOUNDS ARE HEATED TO COOKING TEMPERATURE, WATER IN THE FRYPOT WILL CAUSE OIL TO SPLATTER AND MAY BE A BURN HAZARD.

Remove ice crystals and ensure that food is dry before frying. Excessive water and ice can cause oil to splatter or overflow. Do not over fill the basket. Food needs to be surrounded by oil for best frying results.

Maximum shortening life is achieved by turning the fryer stations off when not in use. In multiple-station units, heat only the component fryers necessary to meet cooking needs.

CAUTION

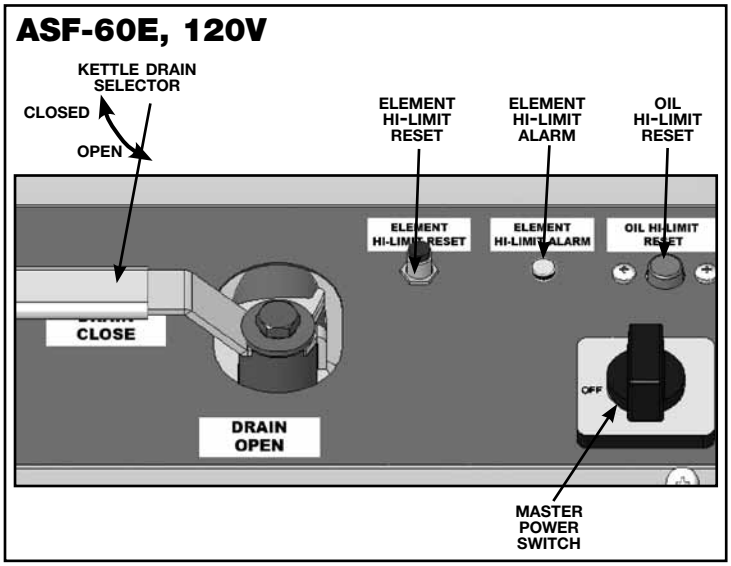
FIRE OR EQUIPMENT DAMAGE CAN RESULT FROM IMPROPER SHORTENING LEVELS. THE LEVEL OF SHORTENING MUST ALWAYS BE ABOVE THE HEAT EXCHANGERS WHEN THE FRYER IS OPERATING. THE REQUIRED SHORTENING LEVEL MUST ALWAYS BE ABOVE THE MINIMUM HOT OIL FILL LINE.

CAUTION

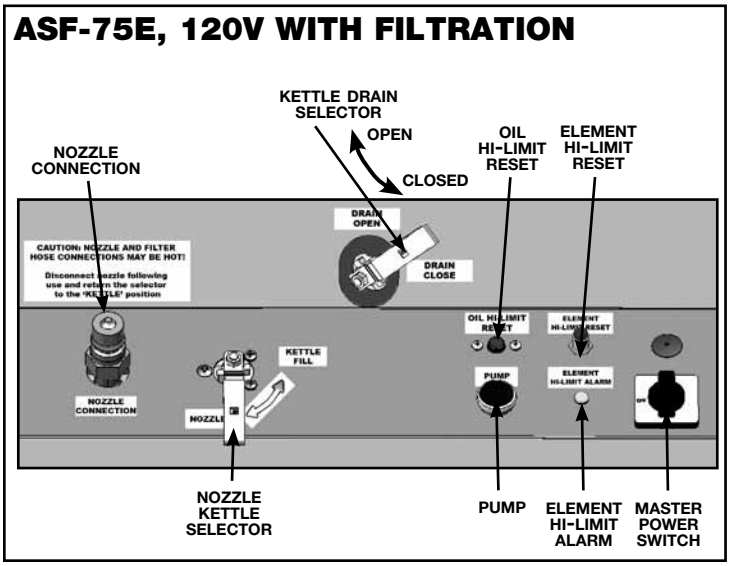
METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

OPERATION

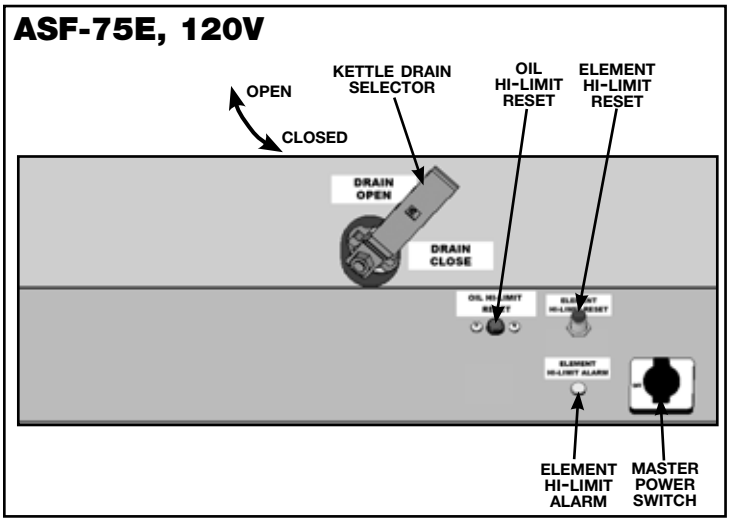
ASF-60E, 120V



ASF-75E, 120V WITH FILTRATION



ASF-75E, 120V



BOIL-OUT PROCEDURE

NOTE: Perform an initial Boil-Out to clean and sanitize the fryer before operating.

Carbonized deposits along with an accumulation of oil will eventually build-up on the interior of the frypot as well as fryer accessories. It is important to periodically remove these deposits, not only to maintain fryer efficiency, but also to provide the highest product quality.

NOTE: Always wear eye protection or a face shield and protective rubber gloves when cleaning the frypot as boil-out chemical is an alkaline solution and can cause severe burns.

NOTE: Because each fryer station is controlled separately, the following procedure must be followed for every component fryer in multiple-station units.

CAUTION

BEFORE ENTERING THIS PROGRAM, MAKE CERTAIN THE FRYPOT IS EMPTY OF ALL OIL OR SHORTENING.

CAUTION

TO AVOID DAMAGING THE PUMP AND CONTAMINATING CLEAN OIL WITH BOIL-OUT CHEMICAL ON UNITS EQUIPPED WITH A FILTRATION SYSTEM, NEVER ALLOW BOIL-OUT SOLUTION OR RINSE WATER TO CIRCULATE THROUGH THE FRYER PUMP SYSTEM.

CAUTION

BOIL-OUT SOLUTION AND SURROUNDING METAL SURFACES BECOME EXTREMELY HOT. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN PERFORMING THE BOIL-OUT FUNCTION AND FOLLOW THE MANUFACTURER'S SAFETY INSTRUCTIONS FOR THE BOIL-OUT PRODUCT BEING USED.

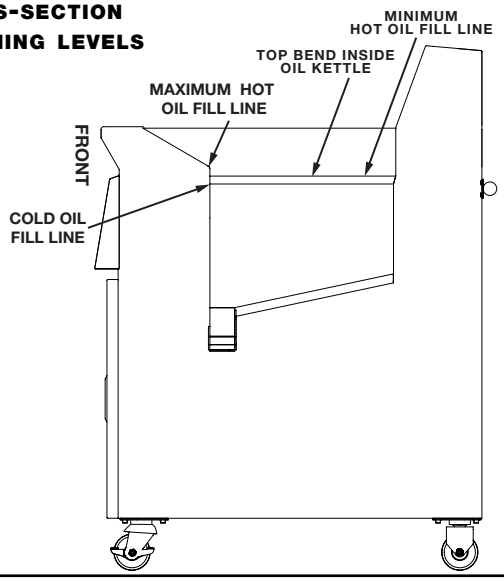
CAUTION

DO NOT LEAVE THE FRYER UNATTENDED DURING THE BOIL-OUT PROCESS. THE FRYER MUST BE CONTINUOUSLY MONITORED FOR BOIL-OVER CONDITIONS, PARTICULARLY IN HIGH-ALTITUDE LOCATIONS. IF BOIL-OVER IS IMMINENT, IMMEDIATELY TURN THE MASTER POWER SWITCH OFF AND ALLOW THE SOLUTION TO COOL. WHEN THE SOLUTION HAS COOLED, RE-ENTER THE BOIL-OUT MODE.

NOTE: Manual Boil-Out can only be performed when the actual temperature of the frypot is less than 230°F (110°C).

1. Place the mobile oil drawer or heat safe container under the drain. Rotate drain valve to **"OPEN"** to drain oil. If equipped with the optional oil hand wand, use the wand to pump oil into the frypot to further rinse food particles out of the frypot. Carefully disconnect the wand from fryer and drain any residual oil from the wand into the frypot and then drain the remaining oil from frypot.
2. While wearing heat resistant gloves, wipe excess oil out of inside of frypot with paper towel or clean rag.
3. If oil has been drained into a mobile oil drawer, empty the oil from the drawer. Wash the oil drawer, rinse with clean water, and dry drawer thoroughly.
4. If the fryer is equipped with a filtration system, clean or replace the filter in the filter cartridge and remove cartridge from unit. (See filtration instructions on page 19.)
5. Open the front access door. If equipped with a filtration system, rotate the Kettle/Nozzle selector to the **"KETTLE"** position, then rotate the drain valve clockwise until rotation stops and the drain valve is **"CLOSED."**
6. Fill the fryer to the maximum oil fill line with water.

FRYER CROSS-SECTION OIL/SHORTENING LEVELS



OPERATION

BOIL-OUT PROCEDURE

CAUTION

KEEP A CONTAINER OF COLD WATER ON HAND DURING BOIL-OUT IN CASE OF BOIL-OVER. IF BOIL-OVER IS IMMINENT, IMMEDIATELY TURN OFF MASTER POWER SWITCH AND POUR COLD WATER INTO FRYPOT TO QUICKLY REDUCE SOLUTION TEMPERATURE.

7. Add boil out solution. Carefully follow the manufacturer's directions for mixing the boil-out solution.

8. Turn the Master Power Switch (located within the front access door) to the **"ON"** position.

9. Press the **ELEMENT HI-LIMIT RESET** button.

10. Wait until the **LED** reads **"HEAt"**, then press the **BOIL OUT** button on the control panel.

11. When 192°F (89°C) is reached, the **LED** will display **"bOIL"** and that temperature will be maintained. Using a separate timer, allow the frypot to boil-out for 10 minutes.

12. After the 10 minute boil-out period, turn the Master Power Switch located behind the front access door to the **"OFF"** position.

13. Wearing protective gloves to avoid burns, scrub the inside of the fypot with a long-handled scrub brush.

14. Place another empty and dry mobile oil drawer or heat safe container under the drain. Rotate the drain to the **"OPEN"** position. **The handle should be rotated counterclockwise until it stops.** Allow the boil-out solution to completely drain into mobile oil drawer or a heat safe container. Discard boil-out solution. Return the drawer to the fully-inserted position beneath the fryer.

15. Making sure the drain is **"OPEN"**, rinse all boil-out solution from fry pot, drain, burner holes, etc. Follow the boil-out solution manufacturer's additional boil-out instructions to rinse the frypot in order to neutralize boil-out cleaner residue. Discard rinse solution.

16. There may be residual boil-out solution in the oil fill-hole and tube. This must be flushed out and discarded separately before filling the tank with new oil to avoid contamination of new oil.

For filtration-equipped fryers: Place a small amount of clean, liquid oil in the clean fat drawer. Pump a small amount of oil through the the system. While wearing heat resistant gloves, catch the oil that is pumped through the fill hole inside frypot with paper towel. Drain the oil. Rinse fry pot with a small amount of water.

For units without a pump or filtration system: Pour a small amount of oil into the the fryer and drain it into a separate container. Rinse frypot and frypot drain with water.

CAUTION

ENSURE THERE IS NO WATER IN THE FRYPOT BEFORE FILLING WITH OIL/SHORTENING. WHEN COOKING COMPOUNDS ARE HEATED TO COOKING TEMPERATURE, WATER IN THE FRYPOT WILL CAUSE OIL TO SPLATTER AND MAY BE A BURN HAZARD.

17. Following the boil-out and rinse procedure, wipe dry all accessible interior metal surfaces and interior accessories with a clean, dry cloth to remove remaining moisture. Clean and dry the fry baskets separately.

NOTE: Make sure the inside of the frypot, the drain opening and all parts that come into contact with new oil/shortening are as dry as possible.

18. Wipe the exterior of the fryer cabinet with a degreaser/sanitizer suitable for use on food contact surfaces. Always follow the manufacturer's instructions and/or mixing directions for proper solution strengths.

Wipe exterior stainless steel surfaces with the grain of the metal and avoid the use of abrasive pads, steel wool, or metal implements.

19. Rotate drain to **"CLOSED"** position.

20. Replace the oil filter if equipped with filtration system. (See instructions on pages 19.)

21. Fill tank with new oil or shortening.

START UP & GENERAL OPERATION

NOTE: Perform an initial Boil-Out to clean and sanitize the fryer station before operating.

1. Service is to be performed by an authorized Alto-Shaam service agent.
2. Ensure all local electrical codes, fire codes, and all other requirements such as hood installation have been met in the process of installation.

NOTE: Because each fryer station is controlled separately, the following procedures must be followed for every component fryer in multiple-station units.

3. Open front access door and ensure drain valve is in the **"CLOSED"** position. **The handle should be rotated clockwise until it stops.**
4. Fill frypot with frying compound as indicated. (SEE ILLUSTRATION ON THE OIL/SHORTENING REQUIREMENTS PAGE)
5. The Master Power Switch is located behind the front access door. Turn Master Power Switch **"ON."**
6. Press the **ELEMENT HI-LIMIT RESET** button.
7. The **LED** display on the control panel will indicate **"-AS-"**, the software version, and then **"cH"**.
8. When the fryer has reached 135°F, the melt cycle is complete and the **LED** display on the control panel will indicate **"HEAt"**.
9. When the fryer displays the set-point temperature, product can be fried.
10. More detailed operating guidelines along with information on programming are located within this manual.
11. To shut the fryer station down, turn the Master Power Switch located behind the front access door to the **"OFF"** position.

⚠ DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

NOTE: **FOR YOUR PROTECTION** The fryer station is furnished with a hi-limit safety shutoff that will disengage the control if the frying compound temperature in the frypot would ever exceed 415°F (213°C). The **LED** will display **"Hi"**, the heat will shut off, the timer will be cancelled, and a constant alarm will sound. In this event, allow the frying compound temperature to drop below 415°F (213°C). Open the front access door and press the **OIL HI-LIMIT RESET** button for a period of 3-seconds to restart the control.

OPERATION

CLEANING & MAINTENANCE

⚠ DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

THOROUGHLY CLEAN DAILY

The cleanliness and appearance of this unit will contribute considerably to operating efficiency and savory, appetizing food. Good equipment kept clean works better and lasts longer.

1. Disconnect unit from power source, and let cool.
2. Remove all detachable items. Clean these items separately with a good grease solvent or commercial detergent. Rinse well and dry.
3. Clean control panel, door vents, door handles, and door gaskets thoroughly since these areas harbor food debris. Rinse by wiping with sponge and clean warm water. Wipe dry with a clean cloth.
4. To help maintain the protective film coating on polished stainless steel, clean the exterior of the unit with a cleaner recommended for stainless steel surfaces. Spray the cleaning agent on a clean cloth and wipe with the grain of the stainless steel.

NOTE: Avoid the use of abrasive cleaning, compounds, chloride based cleaners, or cleaners containing quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel.

Always follow appropriate state or local health (hygiene) regulations regarding all applicable cleaning and sanitation requirements for foodservice equipment.

DANGER

AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

⚠ CAUTION

TO PROTECT STAINLESS STEEL SURFACES, COMPLETELY AVOID THE USE OF ABRASIVE CLEANING COMPOUNDS, CHLORIDE BASED CLEANERS, OR CLEANERS CONTAINING QUATERNARY SALTS. NEVER USE HYDROCHLORIC ACID (MURIATIC ACID) ON STAINLESS STEEL. NEVER USE WIRE BRUSHES, METAL SCOURING PADS OR SCRAPERS.

OIL FILTRATION INSTRUCTIONS (FOR UNITS WITH INSTALLED OPTION)

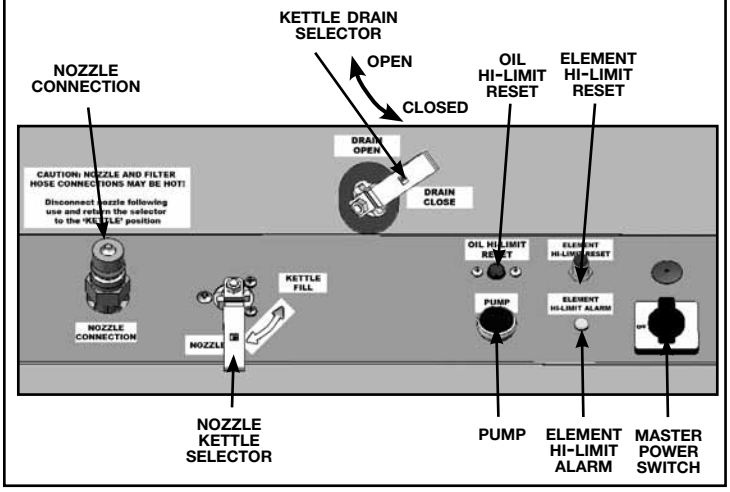
Careful observation of the finished food product will help determine optimal filtering frequency. Filtering the cooking oil at regular intervals will help ensure food quality.

FOR BEST RESULTS: Do not allow the temperature of the oil to decrease below the **"Idle Mode"** temperature of 250°F (121°C) when filtering. If filtering at the end of the day, pump oil back into the kettle while still hot. Do not allow oil to cool before returning to kettle.

CAUTION

OPERATORS MUST BE MADE AWARE OF THE HAZARDS INVOLVED IN THE OPERATION OF A HOT OIL FILTERING SYSTEM. ON-SITE SUPERVISION DURING THE FILTRATION PROCESS AND THE CLEANING PROCESS IS STRONGLY RECOMMENDED.

ASF-75E, 120V WITH FILTRATION



1. Open the front access door. With the Nozzle selector in the **"KETTLE FILL"** position, rotate the drain valve counterclock-wise until rotation stops and the drain valve is in the **"OPEN"** position. Power to the main control panel will automatically switch **"OFF."**
2. Allow contents of the fryer to completely drain.
3. Press the **PUMP "ON"** to allow the oil to circulate through the drain system to flush crumbs. Using the brushes provided, brush the sides and bottom of the fryer while the oil is circulating through the system. Use the angle brush under the heat exchangers.
4. Press the **PUMP "OFF"** and allow contents of the fryer to completely drain.
5. Rotate the drain valve clockwise to the **"CLOSED"** position.
6. Press the **PUMP "ON"** and allow the fryer to refill to the recommended level adding additional oil/shortening as required to maintain proper fill level.
7. After the frypot has completely refilled, pull out the mobile oil trolley and discard the filter into a proper receptacle. Clean the filter assembly and oil trolley, if needed.
8. Replace the oil filter and return the trolley to the proper position beneath the fryer.
9. Press and hold the **"ON/OFF"** key on the main control panel for 1-1/2 to 2 seconds to energize the fryer. Continue normal fryer operation after the preheat function has been completed.

CAUTION

METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

WARNING

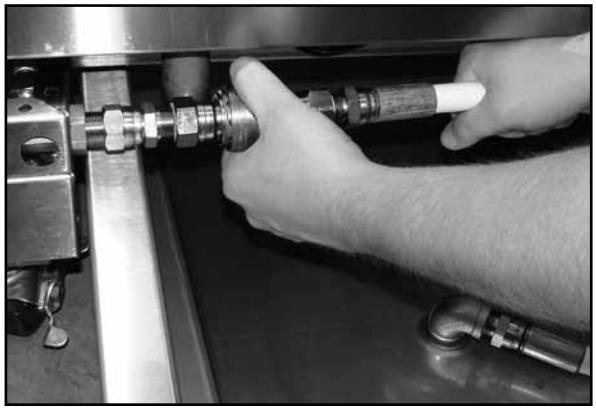
TO AVOID PERSONAL INJURY, USE CAUTION WHEN SURFACES BECOME SLIPPERY DUE TO SPILLED OR DRIPPING OIL.

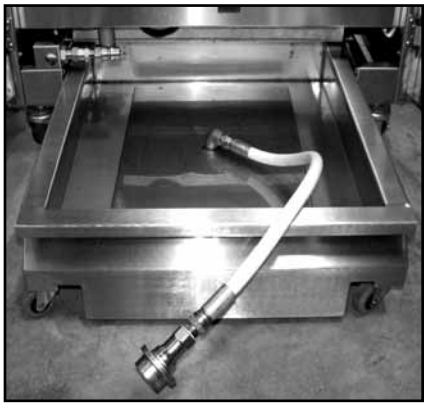
OPERATION

OIL FILTRATION INSTRUCTIONS (FOR UNITS WITH INSTALLED OPTION)

FILTER REPLACEMENT

1. With the **DRAIN** in the **"CLOSED"** position, pull the trolley from the fryer and disconnect the hose from the fryer.



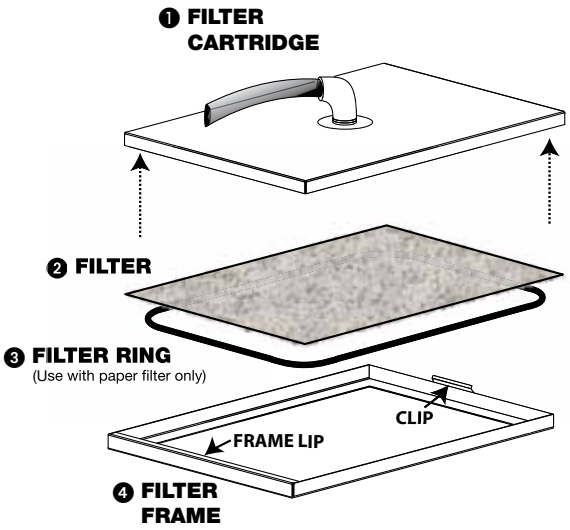


2. Pushing down on filter frame ❹ clip, pull side of filter cartridge ❶ closest to clip upwards. Slide opposite edge of filter cartridge out from beneath the filter frame lip.

3. Remove used filter ❷ and filter ring ❸. Discard filter ❷. Retain filter ring ❸.

4. Place new filter ❷ and filter ring ❸ next to screen on underside of filter cartridge ❶. Reverse step 2 above.

5. Reconnect hose to fryer and return trolley to the full position under the fryer.



STANDARD AND OPTIONAL FILTERS	
PART NO.	**DESCRIPTION**
FI-27791	PAPER (STANDARD WITH FRYER) 7-count package
FI-27794	PAPER (STANDARD WITH FRYER) 100-count package
FI-27648	CHARCOAL/CARBON FILTER 30-count pkg.
FI-27014	REUSABLE MESH FILTER, single

OIL FILTRATION INSTRUCTIONS (FOR UNITS WITH INSTALLED OPTION)

FILTER CLEANING & MAINTENANCE

NOTE: Make certain to use hand protection when working with hot surfaces.

REUSABLE MESH FILTER OPTION:

Clean the reusable mesh filter **(FI-27014)** by spraying thoroughly with hot water. **DO NOT** clean in the dishwasher. **DO NOT** use detergents to clean. Detergents and detergent residues will significantly reduce the life of oil and shortening products.

CAUTION

A WORN FILTER WILL AFFECT PRODUCT FRYING RESULTS.

Make certain the filter is performing efficiently by inspecting the filter each time it is cleaned. Examine for cuts and holes. For the best results, replace the filter whenever necessary.

CAUTION

TO PREVENT FILTER DAMAGE, DO NOT USE SHARP IMPLEMENTS TO REMOVE SCRAPS FROM THE FILTER.

Make certain the filter is securely fastened to the support basket before returning the assembly to the trolley.

To discard deteriorated oil/shortening, the trolley can be pulled from the fryer and can be rolled to a convenient location for use with a pumping device.

ALWAYS MAKE CERTAIN THE TROLLEY IS PROPERLY POSITIONED BENEATH THE FRYER BEFORE OPERATION.

WARNING

TO AVOID PERSONAL INJURY, USE CAUTION WHEN SURFACES BECOME SLIPPERY DUE TO SPILLED OR DRIPPING OIL.

CAUTION

METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

OPERATION

OIL FILTRATION INSTRUCTIONS (FOR UNITS WITH INSTALLED OPTION)

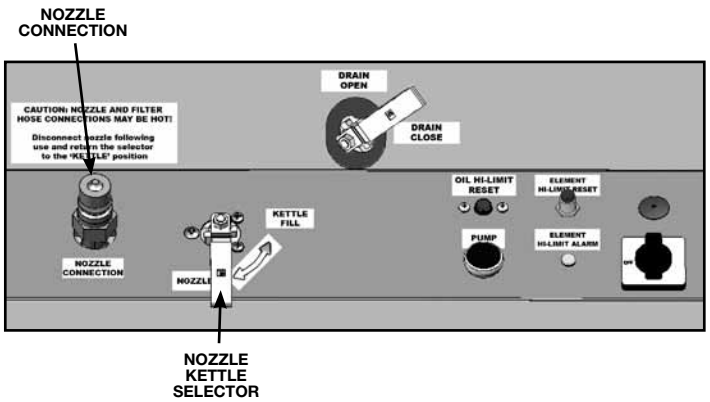
CLEANING & MAINTENANCE

OIL DISCARD HOSE OPTION:

The oil discard hose option (HO-27686) is available as an option to assist both the boil-out and filtration operation.

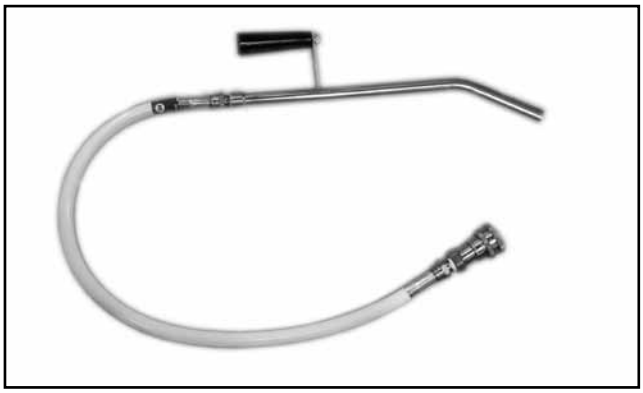
With the discard hose attached to the nozzle connection, place the Kettle/Nozzle selector in the **"NOZZLE"** position.

ASF-75E, 120V WITH FILTRATION



The drain can be placed in the **"OPEN"** or **"CLOSED"** position as required.

Disconnect hose following use and return the selector to the **"KETTLE"** position.



Nozzle will contain a small amount of oil after use. Dispose of properly.

DANGER

TO AVOID SERIOUS PERSONAL INJURY DO NOT STAND ON THE FRYER OR FRYER COVER. THE FRYER COVER IS DESIGNED TO HOLD A MAXIMUM OF 10-POUNDS (4,5 KG) OF WEIGHT.

ALL SUGGESTED FRYING TIMES ARE BASED ON A FULL LOAD OF PRODUCT

Remove ice crystals and ensure that food is dry before frying. Excessive water and ice can cause oil to splatter or overflow. Do not over fill the basket. Food needs to be surrounded by oil for best frying results.

SUGGESTED FRYING TIMES

	ITEM	MINUTES	TEMPERATURE	DISPLAY
PROGRAM KEYS	**1. Fries (FROZEN)**	**3:30**	**350°F (177°C)**	Fries
	2. Chicken Nuggets (FROZEN)	**3:30**	**350°F (177°C)**	Nuggets
	3. Fish, Breaded (FROZEN)	**4:30**	**350°F (177°C)**	Fish
	4. Chicken Pieces, Breaded (FRESH)	**17:00**	**340°F (171°C)**	Chicken
	5. PRODUCT A			ProductC
	6. PRODUCT B			ProductD

ITEM	MINUTES	TEMPERATURE
Appetizer	3:30	350°F (177°C)
Breaded Cauliflower	3:30	340°F (171°C)
Breaded Fish	Per pkg. instructions	340°F (171°C)
Breaded Mac & Cheese	3:30	340°F (171°C)
Breaded Mushrooms	3:30	340°F (171°C)
Broccoli Cheese Nuggets	2:30	350°F (177°C)
Cheese Cake, Fried	8:30	350°F (177°C)
Cheese Nuggets	1:30	350°F (177°C)
Chicken Breasts (FRESH)	12:00-17:00	315°F (171°C)
Chicken Breasts (FROZEN)	20:00	330°F (166°C)
Chicken Fried Steak	4:00	350°F (177°C)
Chicken Gizzards (FRESH)	3:30	350°F (177°C)
Chicken, Legs & Wings (FRESH)	12:00-17:00	315°F (171°C)
Chicken Legs (FROZEN)	18:00	330°F (166°C)
Chicken, Patty	6:00	350°F (177°C)
Chicken Pieces - MRB (FROZEN)	17:00	340°F (171°C)
Chicken Strips	6:00	340°F (171°C)
Chicken Tenderloins (FRESH)	3:00	350°F (177°C)
Chicken Tenders, Breaded (FROZEN)	3:30	350°F (177°C)
Chicken Wings (FRESH)	3:30	350°F (177°C)
Chicken Wings (FROZEN)	15:00	330°F (177°C)
Clam Strips	2:00	340°F (171°C)
Corn Dogs	10:00	350°F (177°C)
Cream Cheese Jalapeño Poppers	3:30	340°F (171°C)

THE TIMES AND TEMPERATURES ARE SUGGESTED GUIDELINES ONLY. ALL COOKING SHOULD BE BASED ON INTERNAL PRODUCT TEMPERATURES. DUE TO VARIATIONS IN PRODUCT QUALITY, WEIGHT, AND DESIRED DEGREE OF DONENESS, THE COOKING TIMES AND TEMPERATURES MAY NEED TO BE ADJUSTED ACCORDINGLY. ALWAYS FOLLOW LOCAL HEALTH (HYGIENE) REGULATIONS FOR ALL INTERNAL TEMPERATURE REQUIREMENTS.

OPERATION

ALL SUGGESTED FRYING TIMES ARE BASED ON A FULL LOAD OF PRODUCT

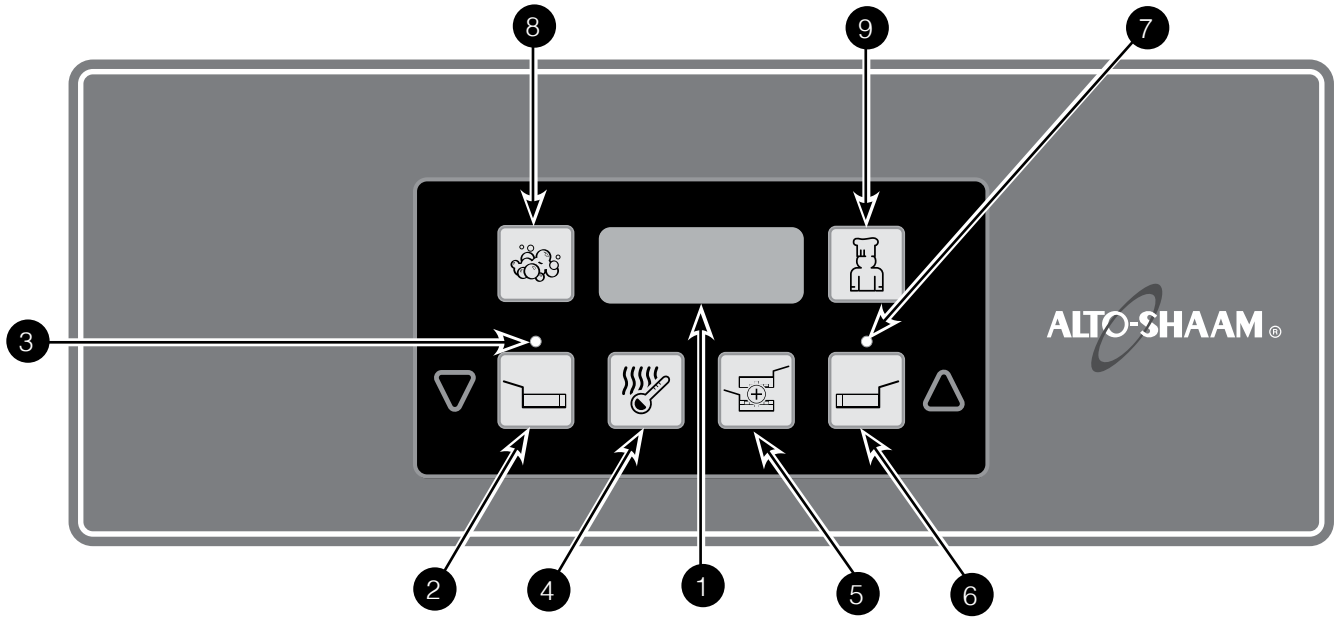
Remove ice crystals and ensure that food is dry before frying. Excessive water and ice can cause oil to splatter or overflow. Do not over fill the basket. Food needs to be surrounded by oil for best frying results.

SUGGESTED FRYING TIMES

ITEM	MINUTES	TEMPERATURE
Eggplant	4:00	340°F (171°C)
Egg Rolls (FROZEN)	5:00	340°F (171°C)
Fries, Crinkle-Cut	5:00	340°F (171°C)
Fries, Seasoned	4:00	340°F (171°C)
Fries, Sour Cream & Chive	4:00	340°F (171°C)
Fries (FRESH)	5:00	340°F (171°C)
Fries, Thin Cut	3:30	340°F (171°C)
Hash Brown Circles	4:00	340°F (171°C)
Jalapeno Peppers, Stuffed	4:00	350°F (177°C)
Mozzarella Sticks, Battered or Breaded	Per pkg. instructions	340°F (171°C)
Mushrooms, Breaded	3:30	350°F (177°C)
Onion Rings	3:00	340°F (171°C)
Pork Chops (FRESH)	10:00	340°F (171°C)
Pork (FRESH)	12:00	340°F (171°C)
Potato Chips (fresh)	2:45	325°F (163°C)
Potato Wedges	3:00	350°F (177°C)
Quesadilla Rolls	3:30	350°F (177°C)
Shrimp	3:30	340°F (171°C)
Vegetables	3:00	350°F (177°C)
Zucchini, Breaded (FRESH)	3:30	350°F (177°C)

THE TIMES AND TEMPERATURES ARE SUGGESTED GUIDELINES ONLY. ALL COOKING SHOULD BE BASED ON INTERNAL PRODUCT TEMPERATURES. DUE TO VARIATIONS IN PRODUCT QUALITY, WEIGHT, AND DESIRED DEGREE OF DONENESS, THE COOKING TIMES AND TEMPERATURES MAY NEED TO BE ADJUSTED ACCORDINGLY. ALWAYS FOLLOW LOCAL HEALTH (HYGIENE) REGULATIONS FOR ALL INTERNAL TEMPERATURE REQUIREMENTS.

PANEL IDENTIFICATION



CONTROL PANEL IDENTIFICATION	
1. L.E.D. 4-DIGIT DISPLAY	6. RIGHT BASKET BUTTON
2. LEFT BASKET BUTTON	7. RIGHT BASKET INDICATOR LIGHT
3. LEFT BASKET INDICATOR LIGHT	8. BOIL OUT BUTTON
4. TEMP DISPLAY BUTTON	9. PROGRAM BUTTON
5. SYNC BASKET BUTTON (Optional)	

CAUTION

METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

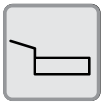
OPERATION

LEFT AND RIGHT BASKET OPERATION

NOTE: Because each fryer station is controlled separately, the following procedures must be followed for every component fryer in multiple-station units.

1. Ensure that the fryer has reached the set-point temperature and it is displayed on the control panel.
(FOLLOW INSTRUCTIONS ON THE START UP AND GENERAL OPERATION PAGE)

2. LOAD PRODUCT Load product in basket(s) and set basket(s) in the fryer lift brackets.

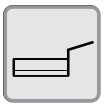
3. 

To operate the left basket, press the **LEFT BASKET** button on the control panel.

The left basket will lower.

The display will show the programmed time and count down the remaining time for the left basket IF IT HAS LESS TIME LEFT THAN THE RIGHT BASKET.

During cooking, the Left Basket Indicator Light will blink fast if its time is displayed and at a slower rate if its time is not displayed.

4. 

To operate the right basket, press the **RIGHT BASKET** button on the control panel.

The right basket will lower.

The display will show the programmed time and count down the remaining time for the right basket IF IT HAS LESS TIME LEFT THAN THE LEFT BASKET.

During cooking, the Right Basket Indicator Light will blink fast if its time is displayed and at a slower rate if its time is not displayed.

5. When the programmed time for either basket has expired:

The basket will automatically rise.

The display will show **"00:00"**, then flash **"L"** or **"r"**, and the alarm will sound on and off.

CONTINUED

LEFT AND RIGHT BASKET OPERATION

6. Press the **LEFT BASKET** or **RIGHT BASKET** button to stop alarm.

7. REMOVE PRODUCT

NOTE: To stop the cooking function of either basket before the programmed time, press the LEFT BASKET or RIGHT BASKET button.

The Indicator Light for that basket will go out.

The display will revert to the other basket's remaining time or the frypot temperature.

The basket will automatically rise.

SHUTDOWN

To shut the fryer station down, turn the Master Power Switch located behind the front access door to the **"OFF"** position.

The basket will automatically rise.

The display will go blank.

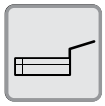
OPERATION

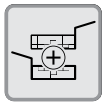
SYNCHRONIZED BASKETS OPTION

NOTE: Because each fryer station is controlled separately, the following procedures must be followed for every component fryer in multiple-station units.

1. Ensure that the fryer has reached the set-point temperature and it is displayed on the control panel.
(FOLLOW INSTRUCTIONS ON THE START UP AND GENERAL OPERATION PAGE)

2. LOAD PRODUCT Load product in baskets and set baskets in the fryer lift brackets.

3.  To operate the both baskets simultaneously, press the **SYNC BASKET** button on the control panel along with either the **LEFT BASKET** or **RIGHT BASKET** button.

 Both baskets will lower.

The display will show the programmed time and count down the remaining time.

During cooking, the Indicator Light of the pushed button will blink fast.

4. When the programmed time has expired:

The baskets will automatically rise.

The display will show **"00:00"**, then flash **"L"** or **"r"**, depending on the pushed button, and the alarm will sound on and off.

5. Press the **LEFT BASKET** or **RIGHT BASKET** button to stop alarm.

6. REMOVE PRODUCT

NOTE: Another cooking function can not be started during a synchronized cooking function.

CONTROL PROGRAMMING OVERVIEW

CAUTION

THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.

NOTE: Because each fryer station is controlled separately, the following procedures must be followed for every component fryer in multiple-station units.

Control Programming allows you to:

- Set the left and right timers
- Choose the set-point temperature
- Choose the correct melt cycle for our frying compound
- Lock the Control Programming
- Select °F or °C for the temperature display

Press the **"PROGRAM"** button to enter Control Programming.

OR

Press the **LEFT BASKET** or **RIGHT BASKET** button to scroll through the choices for each function.

Pressing the **PROGRAM** button confirms the change and moves on to the next function.

+ HOLD

Pressing and holding the **PROGRAM** button for one second exits Control Programming.

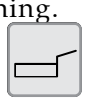
OPERATION

PROGRAMMING THE CONTROL

CAUTION

THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.

NOTE: Because each fryer station is controlled separately, the following procedures must be followed for every component fryer in multiple-station units.

1. **Enter Control Programming.** Press the **PROGRAM** button.
   - If unlocked, the display will go right into the Control Programming sequence.
   - If locked, **"LoC"** will display, and the password routine must be pressed. (The password routine = **LEFT BASKET** - **LEFT BASKET** - **RIGHT BASKET** - **RIGHT BASKET**.)
2. **Set the left and right timer.** First, the Left Basket Indicator Light will come on and the currently set time for the left basket will appear in the **LED** with its colon flashing.
   - Scroll up or down in one second increments by pressing or  .
   - Press to accept the new setting and proceed to the right basket timer.

   Then, the Right Basket Indicator Light will come on and the currently set time for the right basket will appear in the **LED** with its colon flashing.
   - Scroll up or down in one second increments by pressing or .
   - Press to accept the new setting and go on to the set-point temperature.
3. **Choose the set-point temperature.** The current set-point temperature will appear in the **LED** with a flashing **"F"** or **"C"**.
   - Scroll up or down in one degree increments by pressing or .
   - Press to accept the new setting and proceed to offset the temperature.
4. **Calibrate (offset) the temperature.** The current offset temperature will appear in the **LED**, always in °F. The offsets available range from -20°F to 20°F.
   - Scroll up or down in one degree increments by pressing or .
   - Press to accept the new setting and proceed to the melt cycle.

PROGRAMMING THE CONTROL

CAUTION

THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.

5. **Choose the correct melt cycle for your frying compound.** The melt cycle will appear in the **LED** as **"CH L"** or **"CH S"**. **"CH L"** is for liquid frying compounds such as oil and **"CH S"** is for solid frying compounds such as shortening. Do not choose **"CH 0"**.
   - Scroll to change melt cycles by pressing or .
   - Press TWICE to accept the new setting and proceed to the lock.

NOTE: **Do not press just once and change the "gAS" or "ELEC" setting.**

6. **Lock or unlock the Control Programming.** **"LoC"** or **"ULoC"** will appear in the **LED** display. **"LoC"** will prohibit unqualified personnel (without the password) from entering Control Programming. **"ULoC"** will leave Control Programming unlocked.
   - Scroll to change lock condition by pressing or .
   - Press to accept the new setting and proceed to select °F or °C.

7. **Select °F or °C for the temperature display.** **"F"** or **"C"** will appear in the **LED** display. **"F"** will cause the **LED** to display Fahrenheit. **"C"** will cause the **LED** to display Celsius.
   - Scroll to change from °F to °C by pressing or .
   - Press to accept the new setting and proceed to restart Control Programming sequence or press and hold for one second to exit Control Programming.

NOTE: **At any point in the sequence, pressing and holding** **for one second will exit Control Programming.**

BASIC CONTROL TROUBLESHOOTING

TEMPERATURE VERIFICATION

NOTE: Because each fryer station is controlled separately, the following procedures must be followed for every component fryer in multiple-station units.

The temperature of the cooking oil / shortening and the temperature set-point can be verified at any time.

Press **TEMP DISPLAY** button once to verify the actual temperature of the cooking oil / shortening.

Press **TEMP DISPLAY** button twice to verify the set-point temperature.

Press **TEMP DISPLAY** button three times to return the **LED** to its previous reading. The **LED** will also automatically return to its previous reading after three (3) seconds.

If a defective probe is suspected, measure the temperature of the oil / shortening with a thermometer. Compare the thermometer reading with the temperature shown in the control to make certain the readings are reasonably close. If there is a wide discrepancy, perform a complete fryer station shutdown and contact Alto-Shaam service.

ALARM MESSAGES

PROBABLE CAUSE	SOLUTION
Probe open. Probe wired wrong.	Refer to wiring diagram for correct wiring. Measure probe in ice water bath for 100 ohms resistance.
Probe shorted. Hi-limit tripped.	Contact Alto-Shaam service. Allow frypot to cool and press the **OIL HI-LIMIT RESET** button for three (3) seconds.
Drain valve interlock.	Turn Master Power Switch off, ensure the drain is closed, and turn Master Power Switch back on.

⚠ DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

CAUTION

THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.

CAUTION

IT IS RECOMMENDED THIS APPLIANCE BE INSPECTED BY A QUALIFIED SERVICE TECHNICIAN AT REGULAR INTERVALS AS PART OF A STANDARD KITCHEN MAINTENANCE PROGRAM.

EXTENDED LIMITED FRYPOT WARRANTY

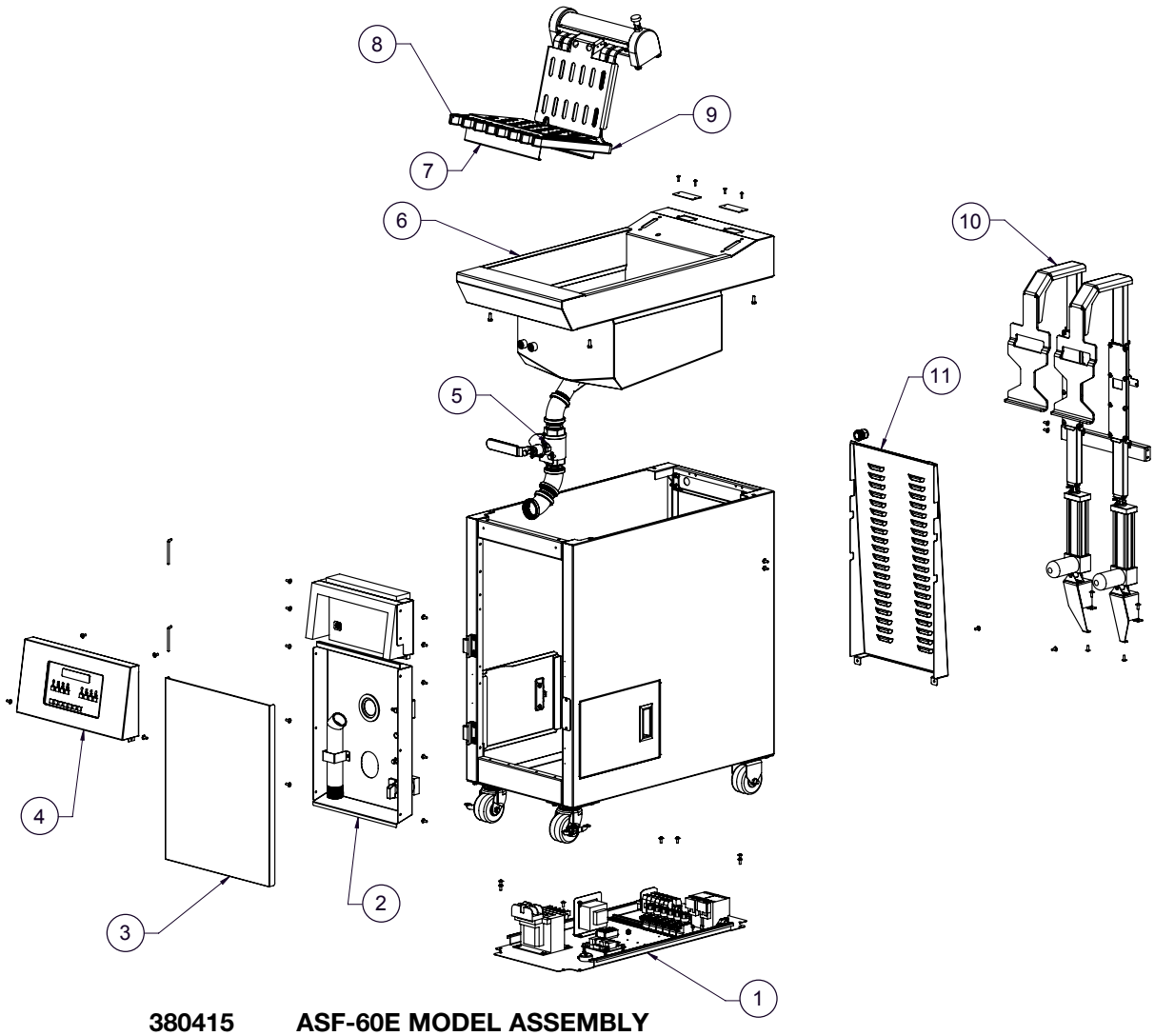
Alto-Shaam, Inc. warrants to the original purchaser that any frypot that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt frypot.

The labor warranty remains in effect for three (3) years from the shipping date. Alto-Shaam will bear shipping and normal labor charges for installation performed during standard business hours, and excluding overtime, holiday rates or any additional fees.

The parts warranty remains in effect for seven (7) years from the shipping date. Following the initial three (3) year labor warranty, Alto-Shaam will replace the frypot only, with freight, labor and all additional charges at the full responsibility of the owner/operator.

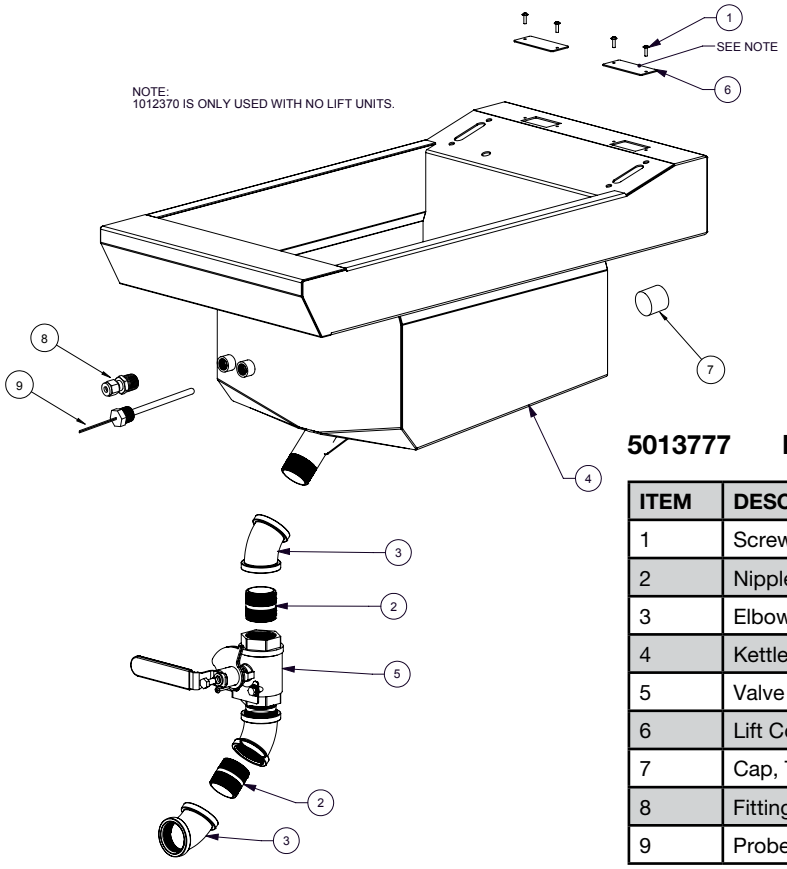
Extended frypot warranty coverage is subject to all remaining provisions as set forth in Alto-Shaam's standard published warranty.

ASF-60E WITH AUTOMATIC LIFTS



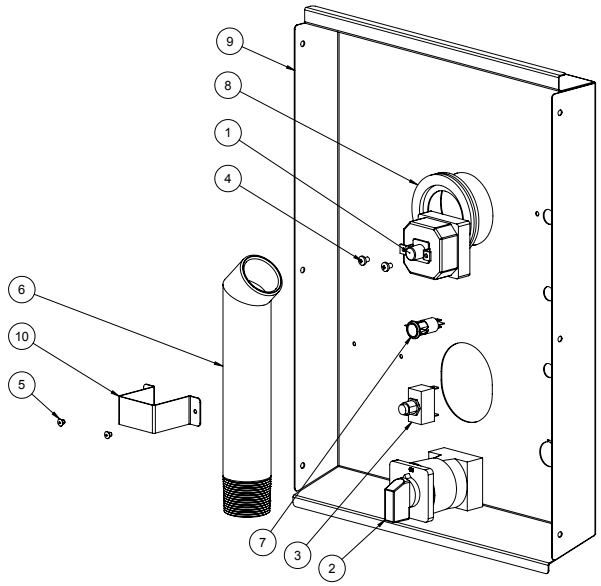
380415 ASF-60E MODEL ASSEMBLY

ITEM	DESCRIPTION	P/N	QTY
1	Electric Control Assembly 380-415V, w/Lift	5008547	1
	Electric Control Assembly 380-415V	5013427	1
	Electric Control Assembly 208-220V	5011179	1
	Electric Control Assembly 208-220V, w/Lift	5007680	1
2	Front Panel with Drain Pipe	5013786	1
3	Door Assembly	5008965	1
4	Control Panel Assembly, 380-415V	5014288	1
	Control Panel Assembly, 208-220V, Basic	5007494	1
5	Drain Valve, 1-1/4" S.S.	VA-28950	1
6	Kettle Assembly, Alto-Shaam	5013777	1
7	Element Guard	1009262	1
8	Element, 380-415V W/TC	EL-34389	1
	Element, 208-220V W/TC	EL-34387	1
9	Element, 380-415V	EL-34385	1
	Element, 208-220V	EL-34352	1
10	Lift Assembly, ASF-60	5007518	1
11	Back Panel, ASF-60	1008458	1



5013777 DRAIN ASSEMBLY

ITEM	DESCRIPTION	P/N	QTY
1	Screw, Philips Truss Head	SC-2472	4
2	Nipple, 1-1/4" NPT	NP-28949	2
3	Elbow, 1-1/4 x 45° Female	EB-28948	2
4	Kettle, ASF-60E, Alto-Shaam	5013776	1
5	Valve Drain Assembly, ASF-60	5011116	1
6	Lift Cover Plate, ASF-60	1012370	2
7	Cap, Threaded, 1/2"	CP-29478	1
8	Fitting, 1/4" Compression x 3/8" NPT	FT-27250	1
9	Probe, NTC Thermistor 100K OHM	PR-34483	1



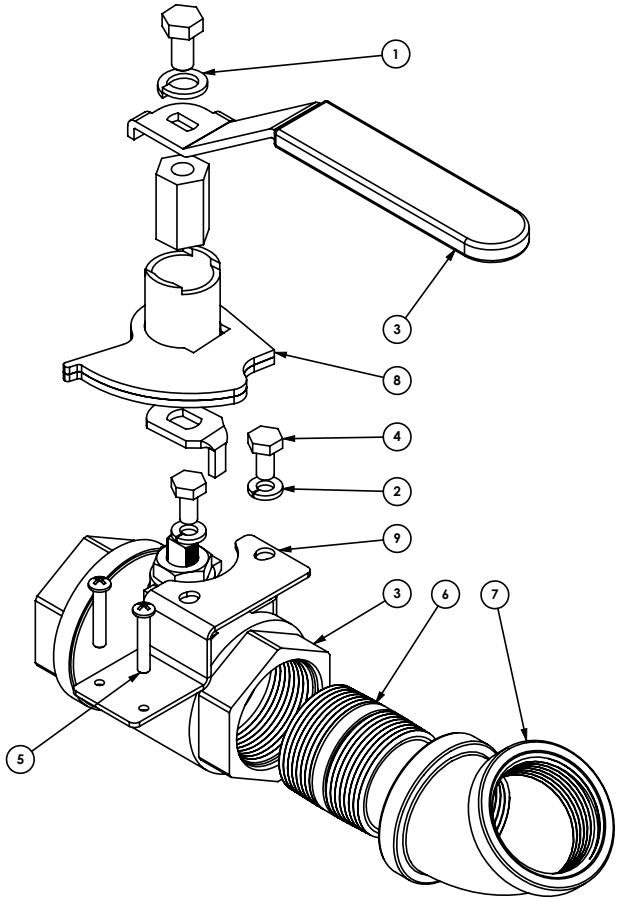
5013786 FRONT PANEL WITH DRAIN PIPE

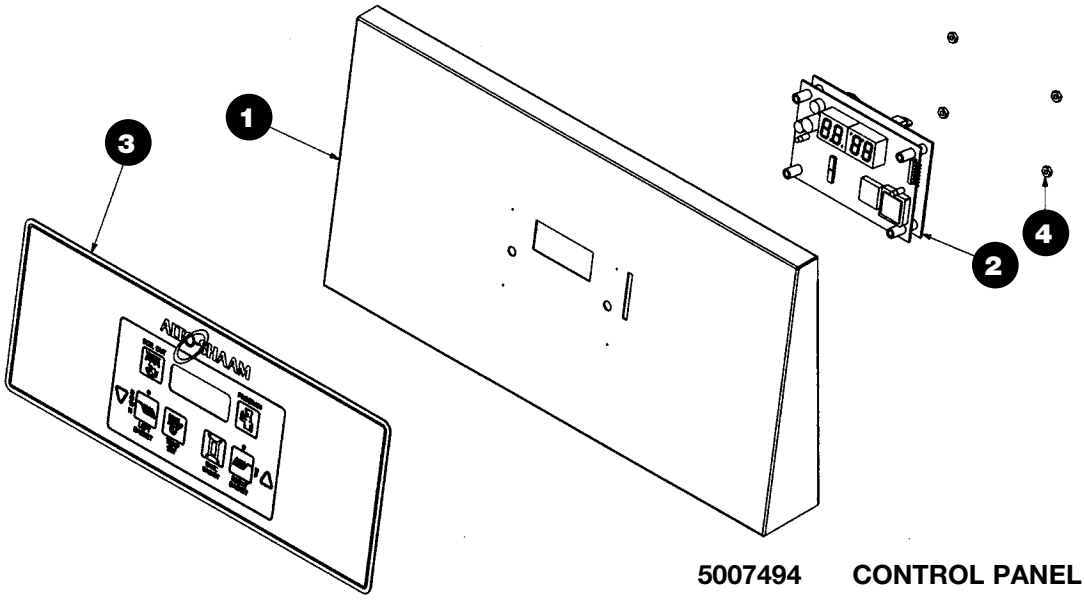
ITEM	DESCRIPTION	P/N	QTY
1	Thermostat, Hi-Limit	TT-34245	1
2	Switch, Cam, for Single Phase	SW-34254	1
3	Switch, Push Button SPST	SW-33495	1
4	Screws, M-4 Philips Head	SC-22271	2
5	Rivet, #42	RI-2097	2
6	Pipe, Drain 1-1/4"	PP-29479	1
7	White Pilot Light, 250V	LI-3951	1
8	Bushing, Socket Membrane	BU-28391	1
9	Panel, Lower Control Mount	1012376	1
10	Bracket, Drain Holder	1010118	1

ASF-60E WITH AUTOMATIC LIFTS

5011116 VALVE DRAIN ASSEMBLY

ITEM	DESCRIPTION	P/N	QTY
1	5/16" SPLIT LOCKWASHER	WS-2867	1
2	LOCK WASHER 1/4"	WS-2294	2
3	BALL VALVE-1 1/4" NPT	VA-28950	1
4	SCREW 1/4-20 x 1/2" HEX HEAD	SC-22729	2
5	SCREW,8-32 X 1,NC PHILLIPS PAN	SC-2069	2
6	NIPPLE-1 1/4" NPT x 1 5/8" LNG THRD	NP-28949	1
7	ELBOW-1 1/4 x 45° FEMALE S/S	EB-28948	1
8	WLDMT-DRAIN CAM	5011115	1
9	BRACKET, DRAIN SWITCH MOUNT	1008739	1



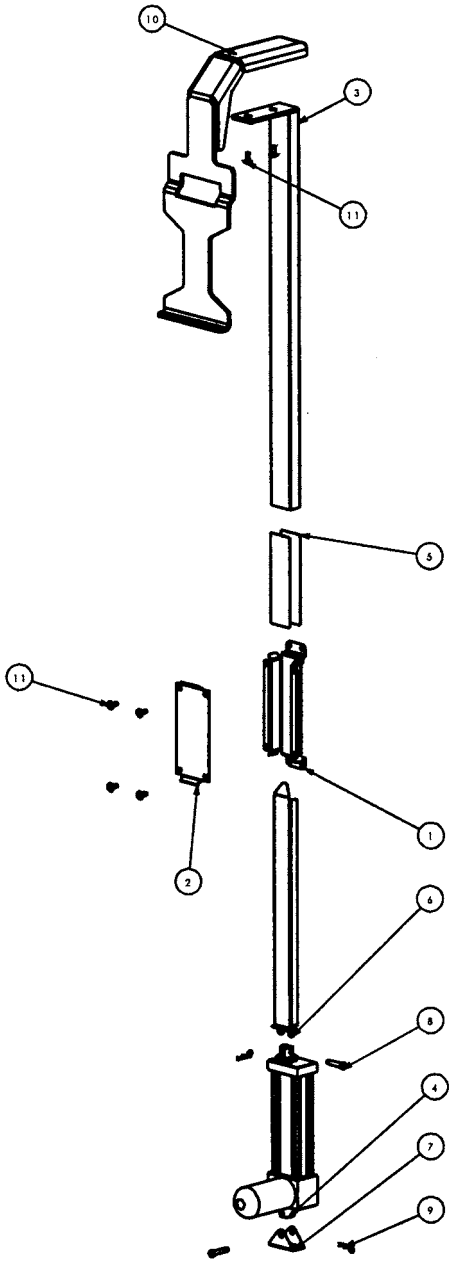


5007494 CONTROL PANEL ASSEMBLY

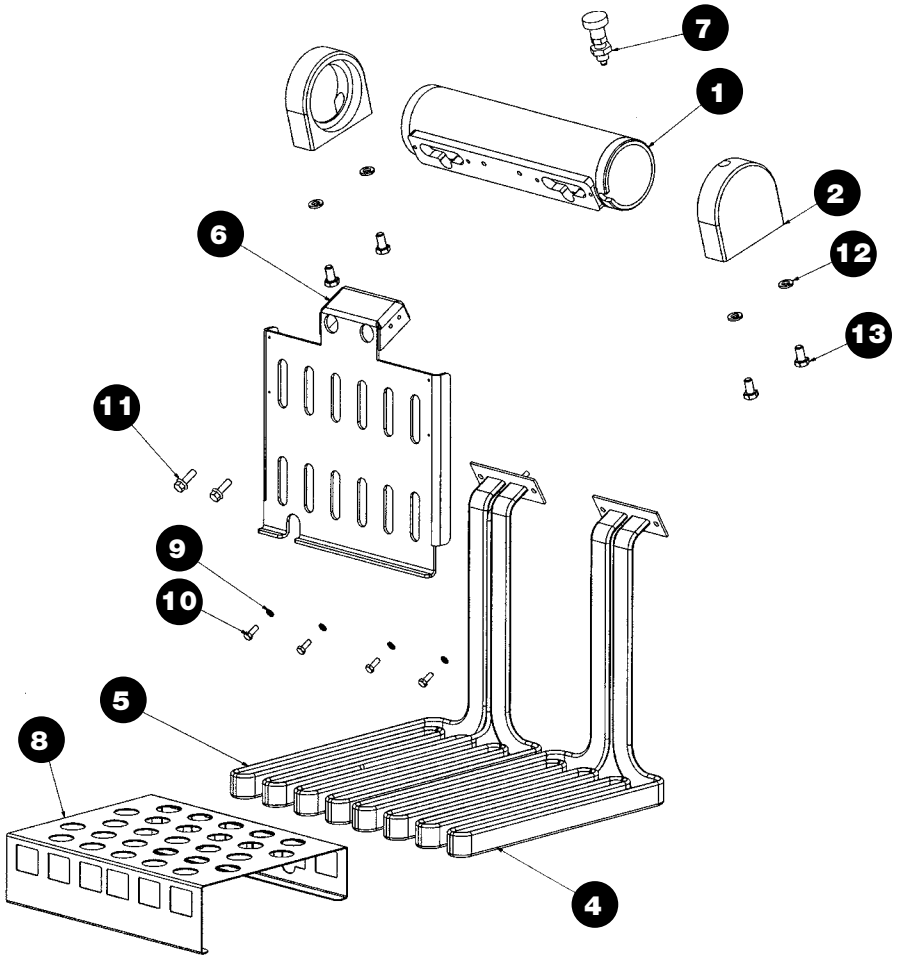
ITEM	DESCRIPTION	P/N	QTY
1	Control Panel Weldment	5007565	1
2	Control, ASF-60, Basic	CC-34499	1
3	Control Panel Overlay	PE-27929	1
4	Nut, 6-32 Hex	NU-2361	4

5007518 LIFT ASSEMBLY

ITEM	P/N	DESCRIPTION	QTY
1	1008420	Guide Column	2
2	1008421	Guide Support	2
3	RD-28118	Rod, Lift Weld	2
4	MO-27011	Motor, Lift	2
5	1008419	Guide Pen	2
6	1008418	Bracket, Lift Motor Mount	2
7	PI-27539	Pin, 1/4" x 1-1/4", Clevis	4
8	PI-27540	Pin, Cotter	4
9	HL-28117	Basket Lift	2
10	SC-2661	Screw, Philips Truss	24



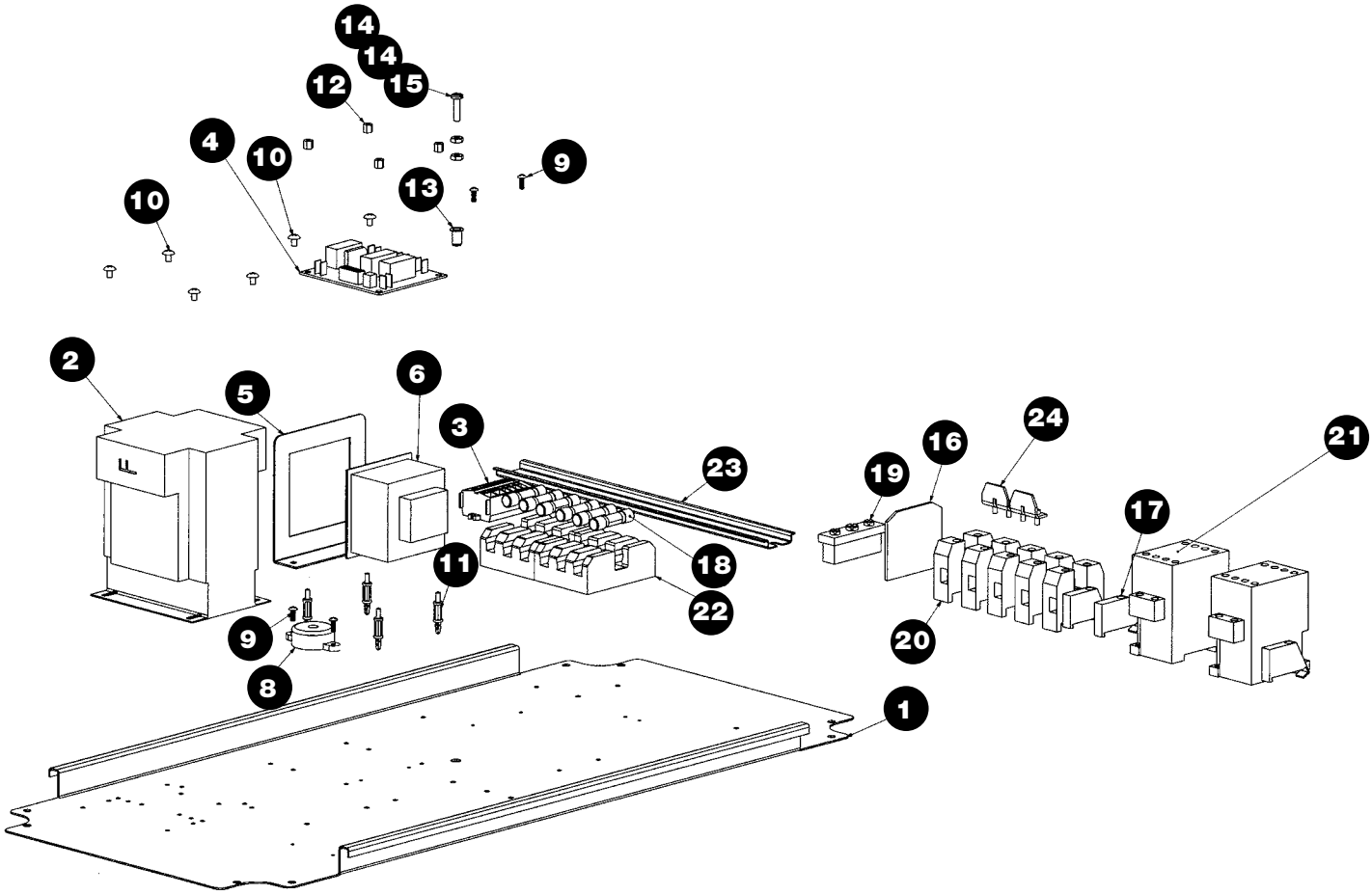
ASF-60E WITH AUTOMATIC LIFTS



5008656 ASF-60E ELEMENT ASSEMBLY

ITEM	DESCRIPTION	P/N	QTY
1	Pipe, 2-1/2" SC H-40	PP-28143	1
2	Hinge Block with Security Pin	BK-27098	1
3	Hinge Block	BK-27099	1
4	Element, 208-220V	EL-34352	1
	Element, 380-415V	EL-34385	1
5	Element, 208-220V W/TC	EL-34387	1
	Element, 380-415V W/TC	EL-34389	1
6	Heater Guard	1008527	1
7	Pin, Security	PI-27152	1
8	Element Guard	1009262	1
9	Washer, Lock, #10	WS-23671	4
10	Screw, 10-32 x 1/2" Hex Head	SC-27481	4
11	Screw, 1/4-20 x 3/4" Flanged Head	SC-25286	2
12	Washer, M8 Split Ring	WS-22303	4
13	Screw, M8 Hex Head	SC-26462	4

ASF-60E WITH AUTOMATIC LIFTS

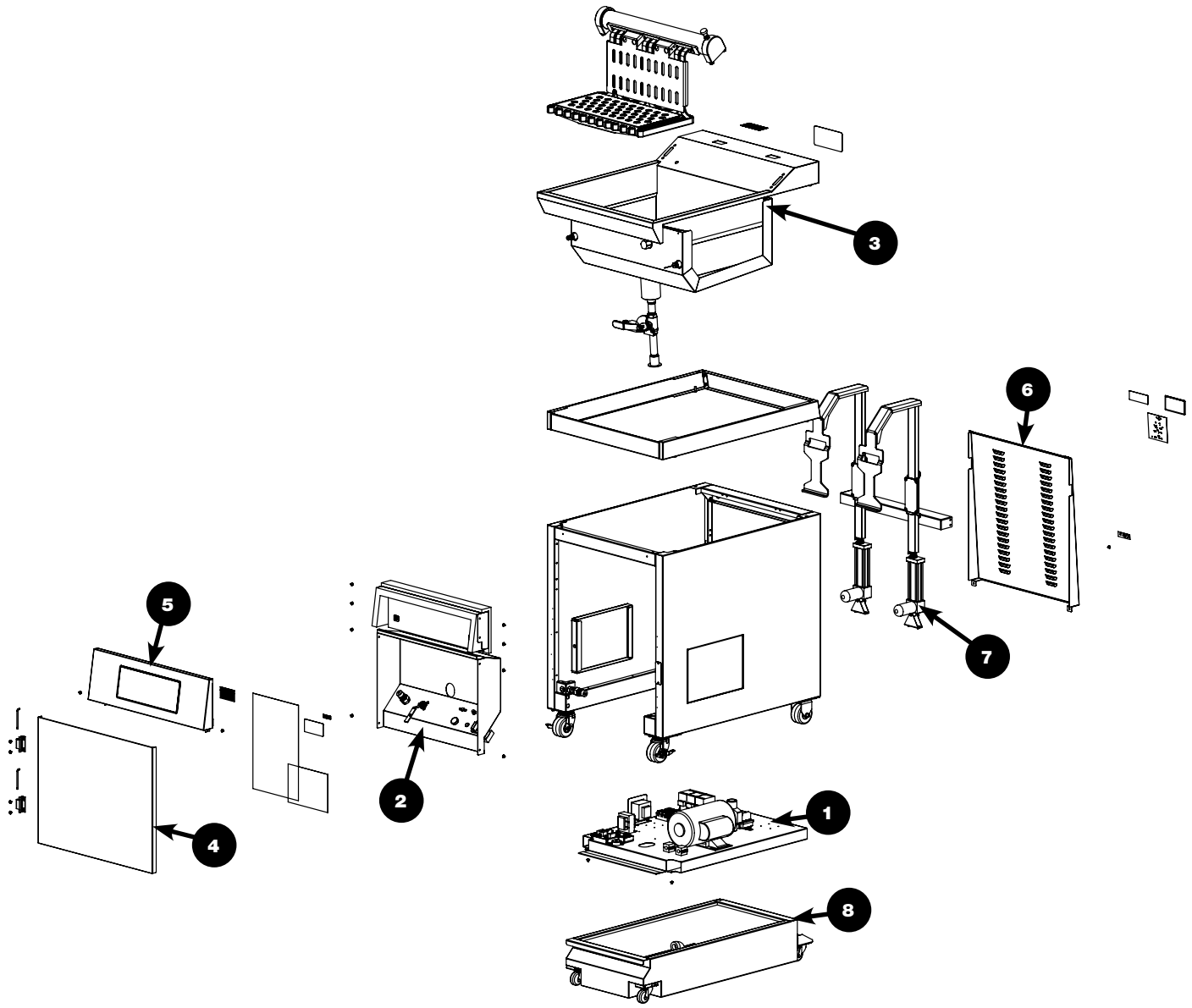


5007680 ASF-60E ELECTRIC ASSEMBLY

ITEM	DESCRIPTION	P/N	QTY
1	Base	1008453	1
2	Transformer, 120V/240V-24V, 150VA	TN-34272	1
3	T-Block, Modular	BK-34372	1
4	Relay Board	BA-34490	1
5	Bracket, Hi-Limit Controller	1006917	1
6	Controller, Hi-Limit	CC-34378	1
7	Wire Set, 208-220V	5007681	1
8	Beeper	BP-3567	1
9	Screw, 6-32 x 3/8 RD HD	SC-23455	4
10	Screw, 8-32 x 1/4" Philips	SC-2459	6
11	Spacer, for Hole in Board	SP-33901	4
12	Spacer, Support, Nylon	SP-33707	4
13	10-32 Threaded Insert	HG-22672	1
14	Nut, 10-32 NF HEX MS, #18	NU-2215	2

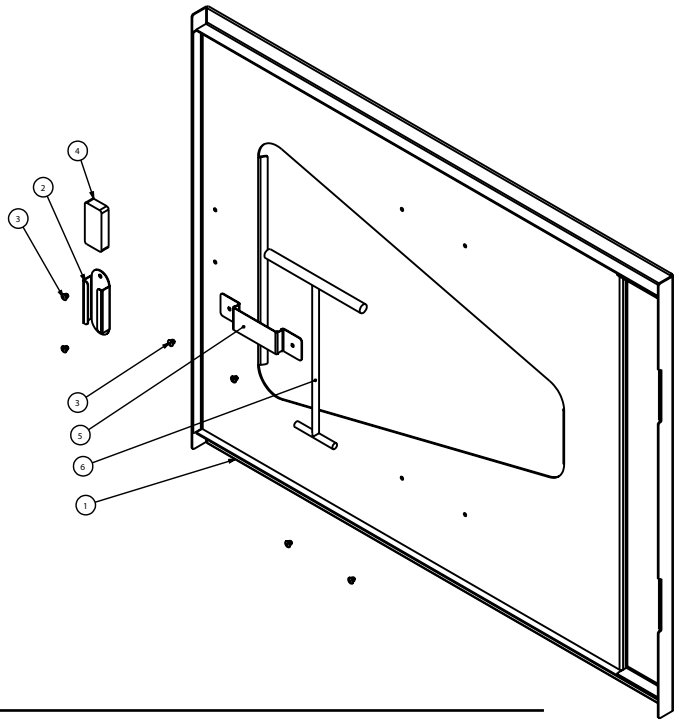
ITEM	DESCRIPTION	P/N	QTY
15	Screw, 10-32 Pan Head	SC-2071	1
16	Terminal, CT, 35mm Wall	TM-3786	1
17	Terminal, CT, Plug, 6.10	TM-3926	3
18	Fuse, 30A, Class G, QC	FU-3860	6
19	Termina, Ground, 35mm	TM-3782	1
20	Terminal, CT, Mark L	TM-3780	5
21	Contactor	CN-3652	2
22	Fuse Holder	FU-3773	2
23	Din Rail, QC 12"	1003551	1
24	Jumper Strip	TM-33837	2
25	Fuse, 4A, Secndary, 3AG Type	FU-34274	1
26	Fuse, 2A, 250V, T-Lag, GLS, MOL	FU-34355	1
27	Connector, Terminal, #10 Stud Ring	CR-3226	1

ASF-75E, WITH FILTRATION & LIFTS



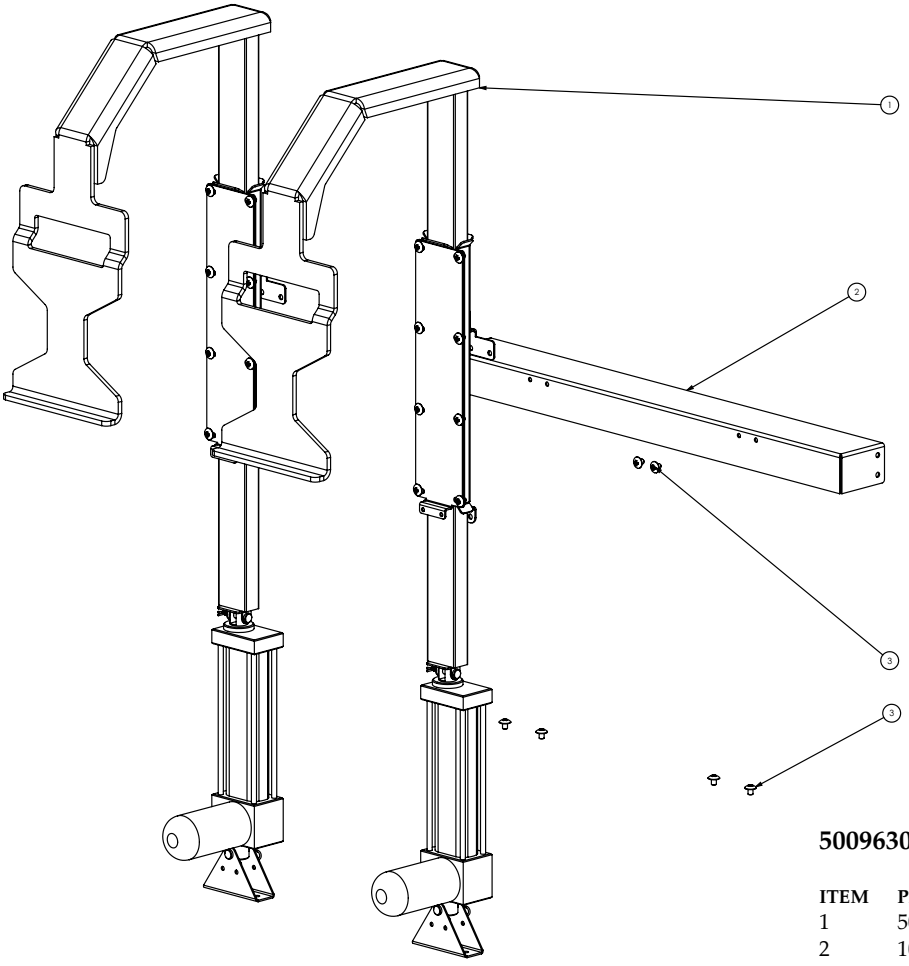
See details for these assemblies on following pages:

ITEM	PART NO	DESCRIPTION	QTY
1	5009735	MOUNT-MOTOR AND ELECTRICAL	1
2	5009636	PANEL, LOWER ASSY W/FILTRATION	1
3	5009628	KETTLE, 208-220 BSC	1
4	5009179	DOOR	1
5	5009211	CONTROL PANEL	1
6	1009361	BACK PANEL	1
7	5009630	LIFT ASSEMBLY	1
8	5008588	FAT DRAWER ASSEMBLY	1



5009179 DOOR ASSEMBLY

ITEM	PART NO	DESCRIPTION	QTY
1	5009177	DOOR	1
2	1006303	MAGNET BRACKET	1
3	RI-2097	#42 STAINLESS RIVET	6
4	MA-25734	DOOR MAGNET	1
5	1009689	ELEMENT LIFT BRACKET	1
6	RL-27690	ELEMENT LIFT	1



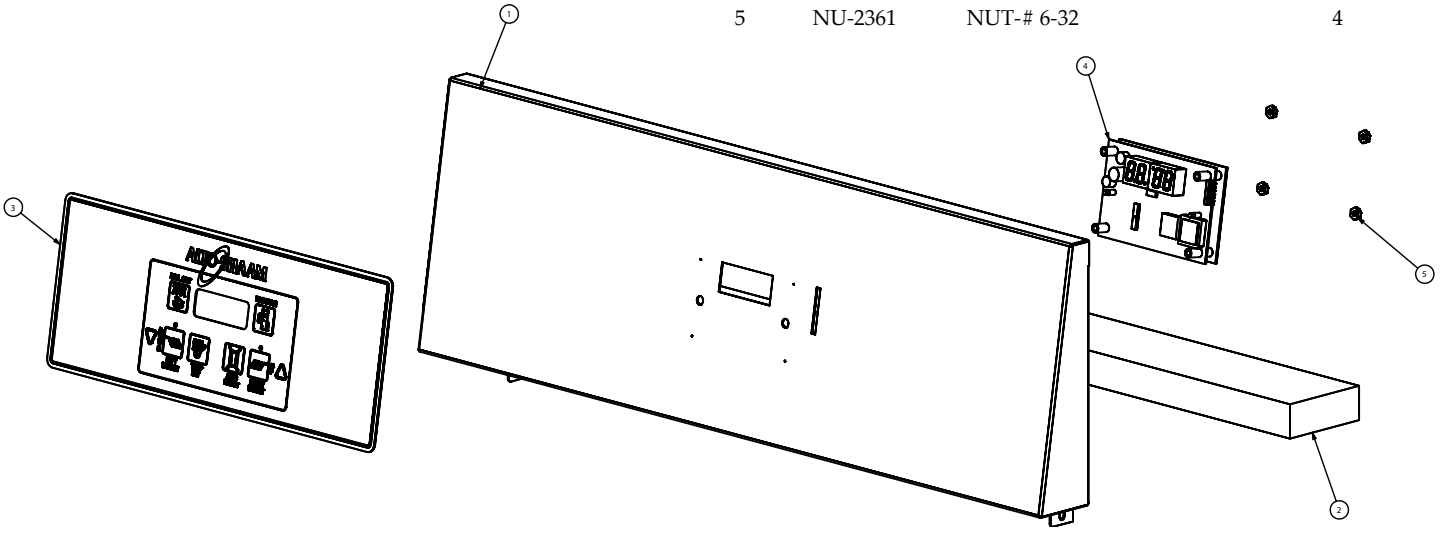
5009630 LIFT ASSEMBLY

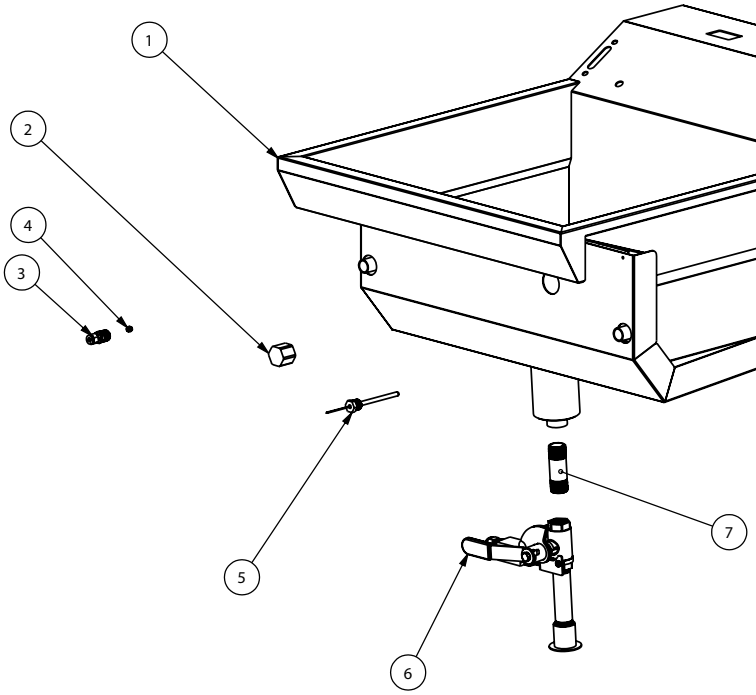
ITEM	PART NO	DESCRIPTION	QTY
1	5009631	SINGLE LIFT ASSEMBLY	2
2	1010240	BRACKET, LIFT SUPPORT	1
3	SC-26791	SCREW 10-32 X 1/4" PAN HEAD	8

ASF-75E, WITH FILTRATION & LIFTS

5009211 **CONTROL PANEL**

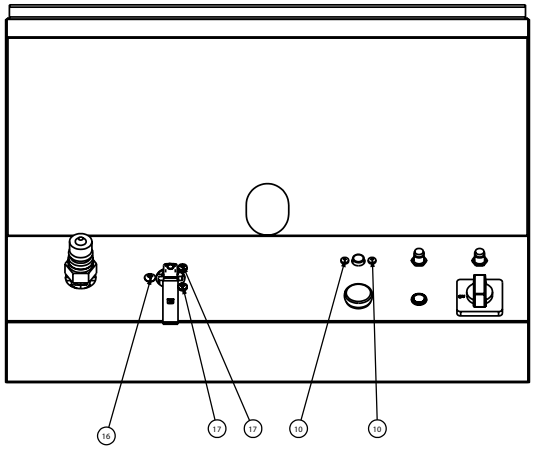
ITEM	PART NO	DESCRIPTION	QTY
1	5009212	WELDMENT-CONTROL PANEL	1
2	IN-22985	INSULATION, 1/2" CER WOOL	1
3	PE-27929	OVERLAY WITH MEMBRANE	1
4	CC-34499	CONTROL	1
5	NU-2361	NUT-# 6-32	4

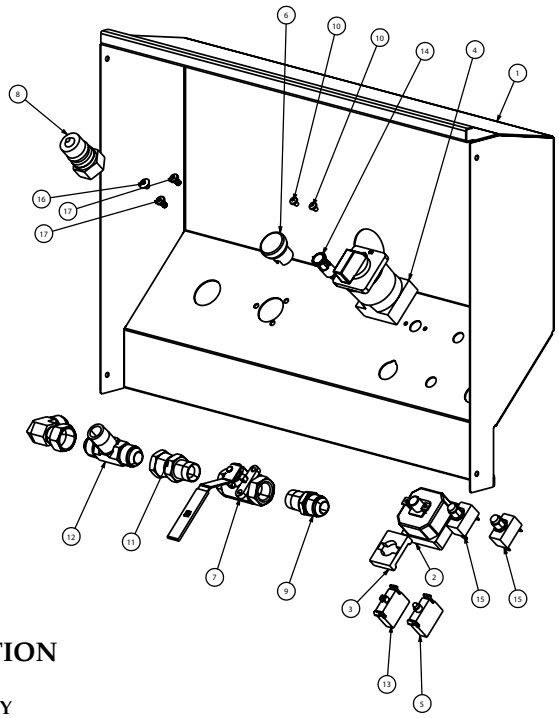




5009628 **KETTLE, 208-220 BASIC**

ITEM	PART NO	DESCRIPTION	QTY
1	KE-27012	ASF-75E KETTLE ASSY.	1
2	CP-28016	CAP-3/4 NPT	1
3	FT-27250	FITTING-1/4" COMPRESSION	1
4	FT-27251	FERRULE, COMPRESSION, 6MM	1
5	PR-34483	PROBE-NTC THERMISTOR	1
6	5008473	DRAIN ASSEMBLY	1
7	NP-27402	PIPE NIPPLE, 3/4NPT X 10" LG	1

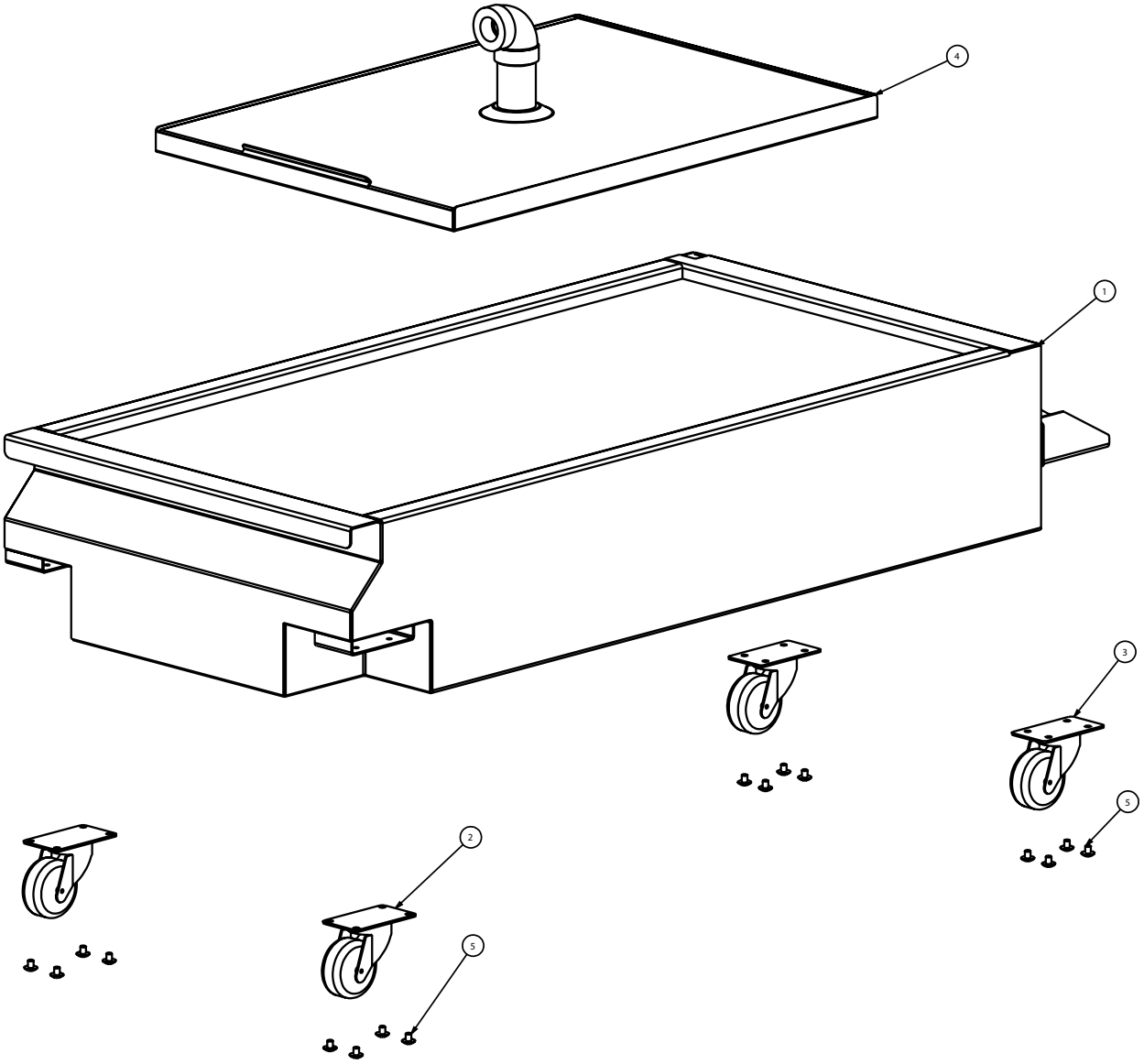




5009636 PANEL, LOWER ASSY W/ FILTRATION

ITEM	PART NO	DESCRIPTION	QTY
1	1009369	PANEL, FRONT LOWER	1
2	TT-34245	THERMOSTAT, HI-LIMIT	1
3	PA-27057	PLATE-LIGHT MOUNTING	1
4	SW-34254	SWITCH, CAM, FOR SINGLE PHASE	1
5	LI-34252	LIGHT PUMP, PUSH BUTTON	1
6	SW-34240	PUSH BUTTON SWITCH-PUMP	1
7	VA-28274	VALVE-BALL 1/2" NPT PANEL MOUNT	1
8	FT-28008	FITTING-1/2 NPT X ½ QUICK DISCT	1
9	FT-28275	FITTING-1/2-14 NPTF X 37° CONNECTOR	1
10	SC-22271	SCREWS, M4-0.7 X 6MM PHIL	2
11	FT-28661	FITTING-ADAPTER 37° TO NPTF	1
12	TE-28662	TEE-37° X 37° X NPTF	1
13	LI-34251	SWITCH-PUSH BUTTON	1
14	LI-3951	WHITE PILOT LIGHT 250V	1
15	SW-33495	SWITCH-PUSH BUTTON SPST	2
16	SC-26791	SCREW10-32 X 1/4" PAN HEAD	1
17	SC-28288	SCREW-10-24 X .375 PHMS	2
18	EB-28687	ELBOW-#1037° X 37°	1

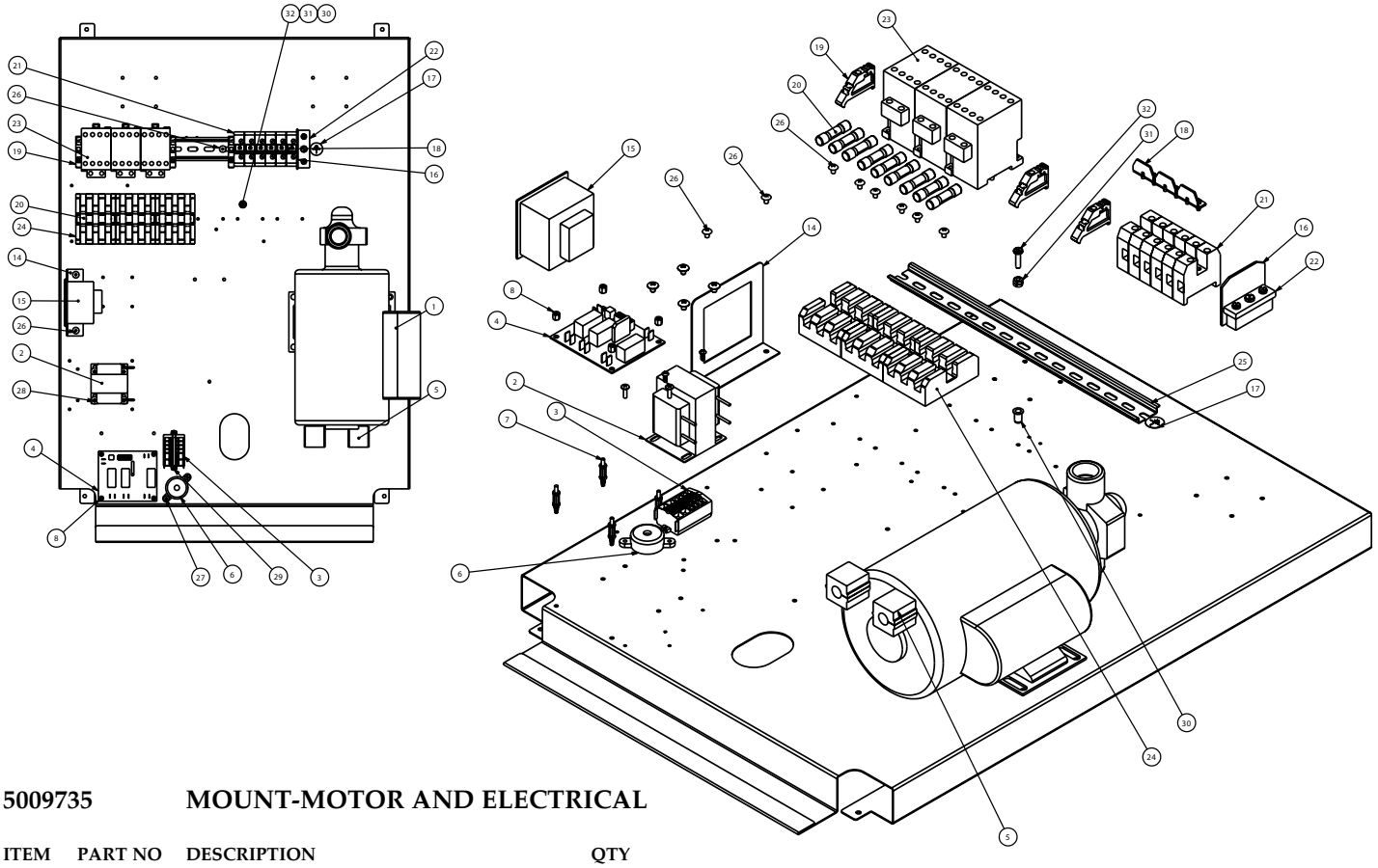
ASF-75E, WITH FILTRATION & LIFTS



5008588 FAT DRAWER ASSEMBLY

ITEM	PART NO	DESCRIPTION	QTY
1	5008589	WLDMT-FAT DRAWER	1
2	CS-27054	CASTER, 2" WHEEL	2
3	CS-27253	CASTER, 2" WHEEL	2
4	5008591	FILTER CARTRIDGE	1
5	SC-26791	SCREW 10-32 X 1/4" PAN HEAD	16
6	HO-27649	HOSE, FRYER FILTER	1

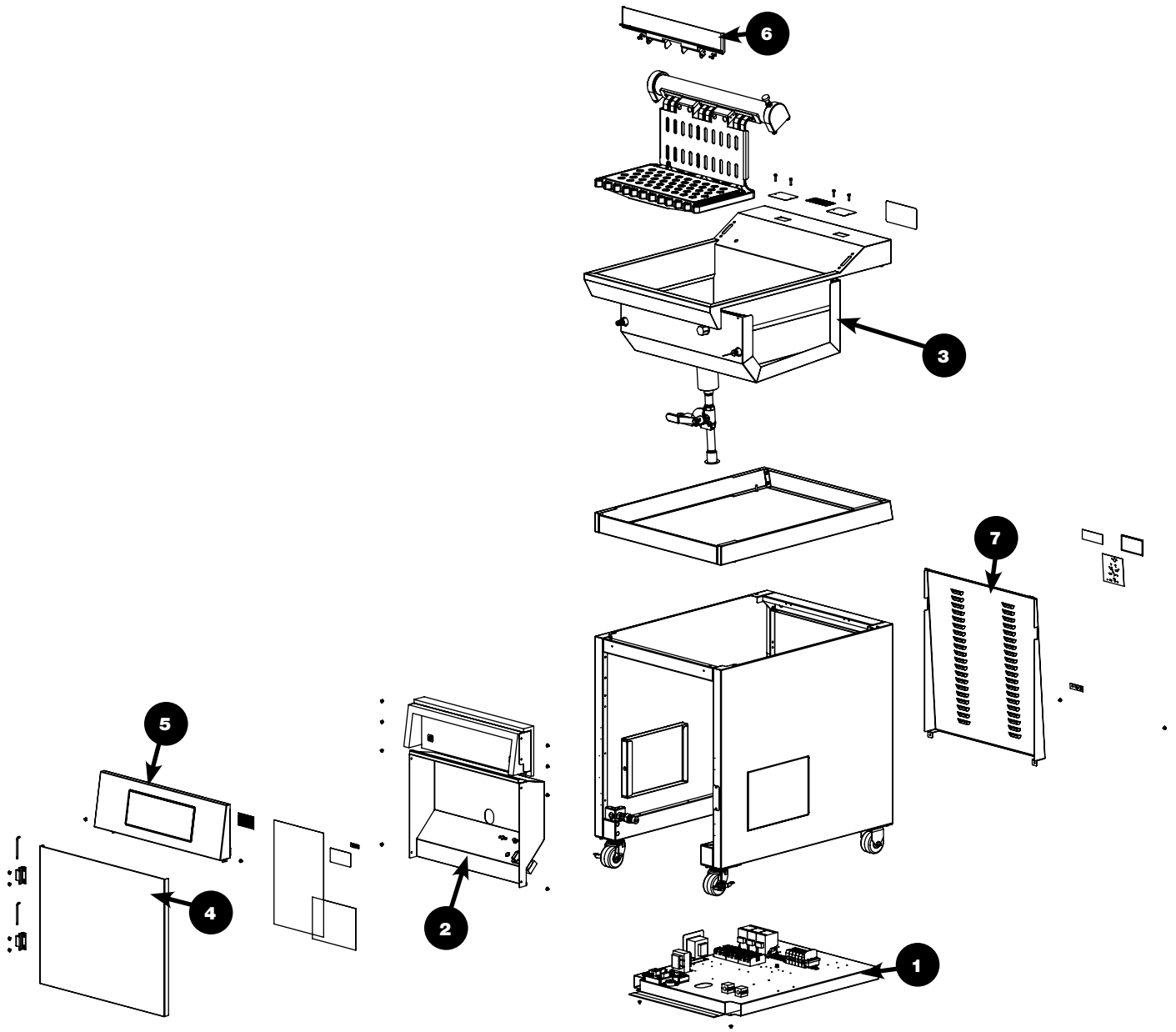
ASF-75E, WITH FILTRATION & LIFTS



5009735 MOUNT-MOTOR AND ELECTRICAL

ITEM	PART NO	DESCRIPTION	QTY
1	1009269	MOTORPLATE-ASF-75	1
2	TN-33282	TRANSFORMER, 230V/24V, 50A,	1
3	BK-34372	T-BLOCK,MODULAR	1
4	BA-34490	RELAY BOARD-ASF-60	1
5	FI-33406	FERRITE FILTER-CLAMP	2
6	BP-3567	BEEPER	1
7	SP-33901	SPACER, 7/16 FOR .125 HOLE IN .062" BRD	4
8	SP-33707	SPACER, SUPPORT, NYL, 1.4"	4
9	FU-34355	FUSE-2A 250V, T-LAG, GLS, MOL	1
10	CD-34380	CORD, SOOW 16GA, 3COND.	1
11	CR-3226	CONNECTOR, TERM., #10 STUD RING	1
12	5007274	WIRESET, ASF-75E, 208-220V	1
13	FU-34274	FUSE-4A SECONDARY, 3AG TYPE	1
14	1006917	BRACKET, HI-LIMIT CONTROLLER	1
15	CC- 34378	CONTROLLER,HI-LIMIT	1
16	TM-3786	TERMINAL, CT, 35MM WALL, PART	1
17	LA-33002	INTERNAL GROUND LABEL	1
18	TM-33837	JUMPER STRIP	3
19	TM-3926	TERMINALS, *CT, PLUG, 6.10	3
20	FU-3860	FUSE-30A, CLASS G, QC	9
21	TM-3780	TERMINAL, CT, MARK, L	6
22	TM-3782	TERMINAL, GROUND, 35MM	1
23	CN-3652	CONTACTOR	3
24	FU-3773	FUSE HOLDER	3
25	1006484	DIN RAIL	1
26	SC-2459	8-32X1/4" PHIL SCREW	12
27	SC-2472	SCREW, 6-32X1/2, NC PHIL TRUSS M/S	2
28	SC-26791	SCREW10-32X1/4" PAN HEAD	4
29	SC-23455	6-32X3/8 RD HD	2
30	HG-22672	10-32 THREADED INSERT	1
31	NU-2215	NUT, 10-32, NF HEX MS, #18-8 S/S	2
32	SC-2071	10-32X3/4 PAN HD	1
33	MO-34469	5EW/S74 MOTOR-230V CE	1

ASF-75E, NO FILTRATION OR LIFTS

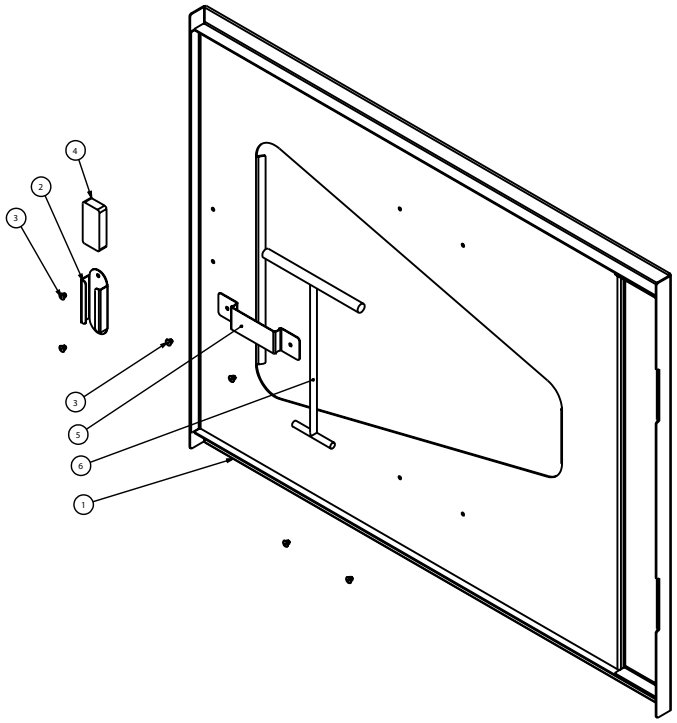


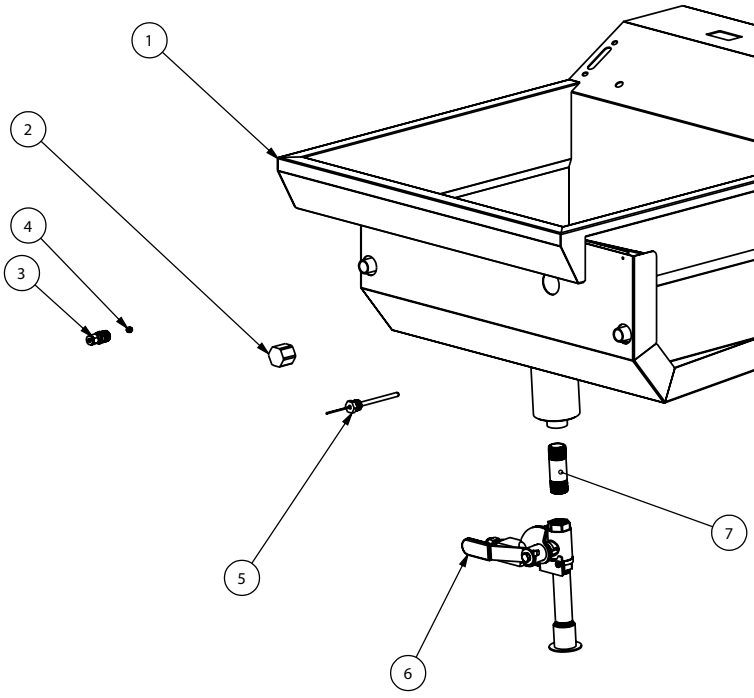
See details for these assemblies on following pages:

ITEM	PART NO	DESCRIPTION	QTY
1	5009634	MOUNT-MOTOR AND ELECTRICAL	1
2	5009217	PANEL, LOWER ASSY	1
3	5009628	KETTLE-75E, 208-220 BSC	1
4	5009179	DOOR	1
5	5009210	CONTROL PANEL-ASF-75 BSC	1
6	5009645	BASKET HANGER	1
7	1009361	PANEL-BACK	1

5009179 **DOOR ASSEMBLY**

ITEM	PART NO	DESCRIPTION	QTY
1	5009177	DOOR	1
2	1006303	MAGNET BRACKET	1
3	RI-2097	#42 STAINLESS RIVET	6
4	MA-25734	DOOR MAGNET	1
5	1009689	ELEMENT LIFT BRACKET	1
6	RL-27690	ELEMENT LIFT	1

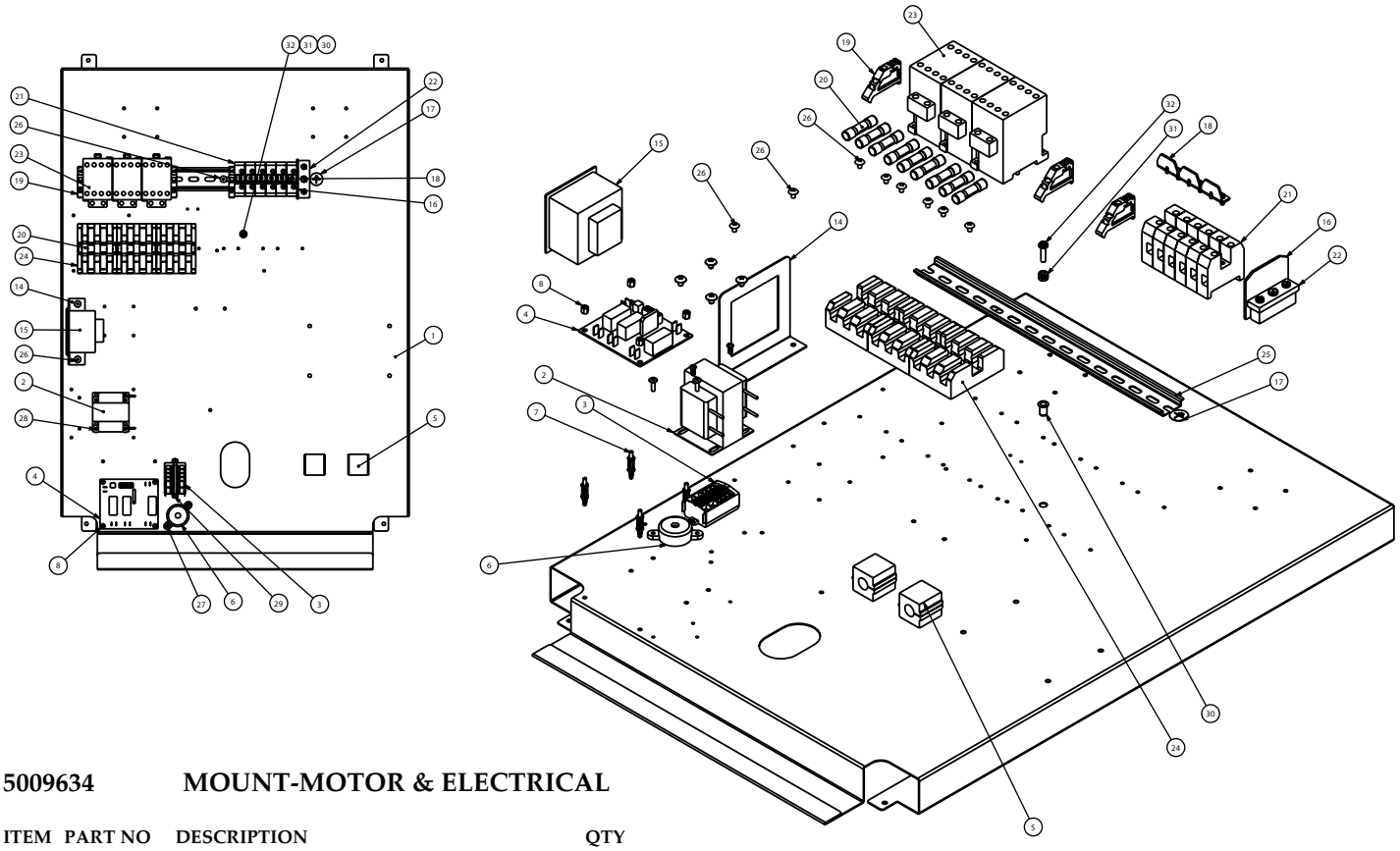




5009628 **KETTLE, 208-220 BASIC**

ITEM	PART NO	DESCRIPTION	QTY
1	KE-27012	ASF-75E KETTLE ASSY.	1
2	CP-28016	CAP-3/4 NPT	1
3	FT-27250	FITTING-1/4" COMPRESSION	1
4	FT-27251	FERRULE, COMPRESSION, 6MM	1
5	PR-34483	PROBE-NTC THERMISTOR	1
6	5008473	DRAIN ASSEMBLY	1
7	NP-27402	PIPE NIPPLE, 3/4NPT X 10" LG	1

ASF-75E, NO FILTRATION OR LIFTS

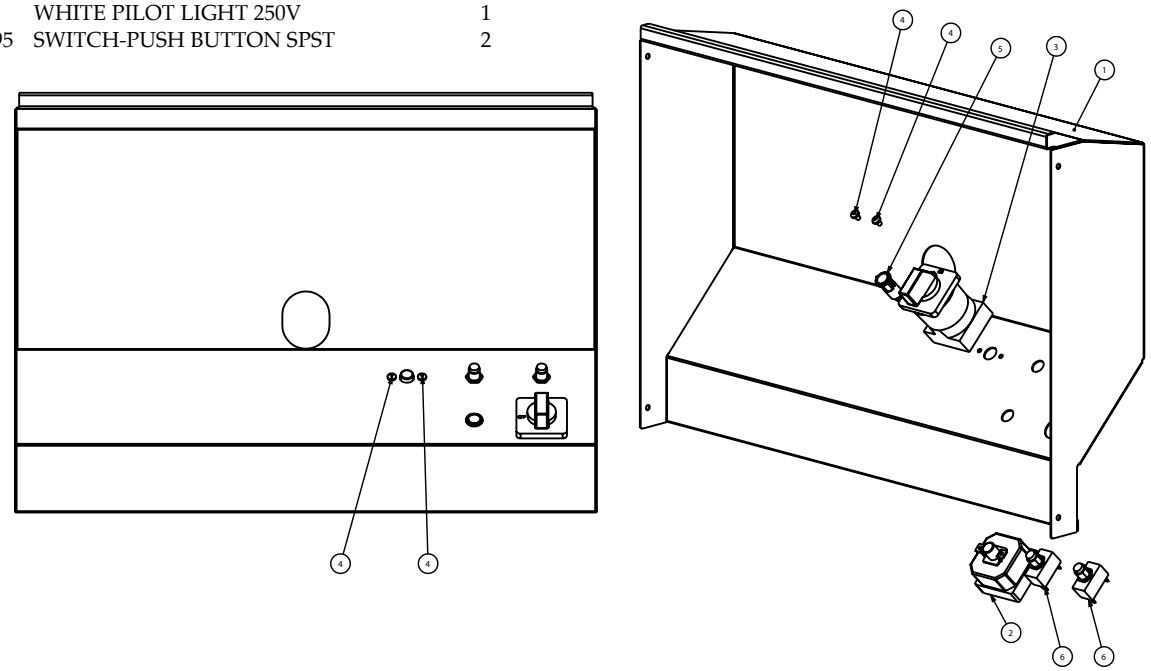


5009634 MOUNT-MOTOR & ELECTRICAL

ITEM	PART NO	DESCRIPTION	QTY
1	1009269	MOTOR PLATE	
2	TN-33282	TRANSFORMER, 230V/24V,50A	1
3	BK-34372	T-BLOCK, MODULAR	1
4	BA-34490	RELAY BOARD ASF-60	1
5	FI-33406	FERRITE FILTER-CLAMP	2
6	BP-3567	BEEPER	1
7	SP-33901	SPACER, 7/16 FOR .125 HOLE IN .062" BRD	4
8	SP-33707	SPACER, SUPPORT, NYL, 1.4"	
9	FU-34355	FUSE-2A250V, T-LAG, GLS, MOL	1
10	CD-34380	5CORD, SOOW 16 GA, 3 COND.	
11	CR-3226	CONNECTOR, TERM., # 10 STUD RING	1
12	5007274	WIRESET, ASF-75E, 208-220V	1
13	FU-34274	FUSE-4 A SECONDARY, 3AG TYPE	1
14	1006917	BRACKET, HI-LIMIT CONTROLLER	1
15	CC-34378	CONTROLLER, HI-LIMIT	1
16	TM-3786	TERMINAL, CT, 35MM WALL, PART	1
17	LA-33002	INTERNAL GROUND LABEL	1
18	TM-33837	JUMPER STRIP	
19	TM-3926	TERMINALS, *CT, PLUG, 6.10	
20	FU-3860	FUSE-30A, CLASSG, QC	9
21	TM-3780	TERMINAL, CT,MARK, L	6
22	TM-3782	TERMINAL, GROUND, 35MM	1
23	CN-3652	CONTACTOR	3
24	FU-3773	FUSEHOLDER	3
25	1006484	DINRAIL	1
26	SC-2459	8-32X1/4" PHILSCREW	12
27	SC-2472	SCREW, 6-32X1/2, NC PHIL TRUSS	2
28	SC-26791	SCREW10-32X1/4"PANHEAD	4
29	SC-23455	66-32X3/8 RD HD	2
30	HG-22672	10-32 THREADED INSERT	1
31	NU-2215	NUT,10-32,NF HEX MS,# 18-8 S/S	2
32	SC-2071	10-32X3/4 PAN HD	1

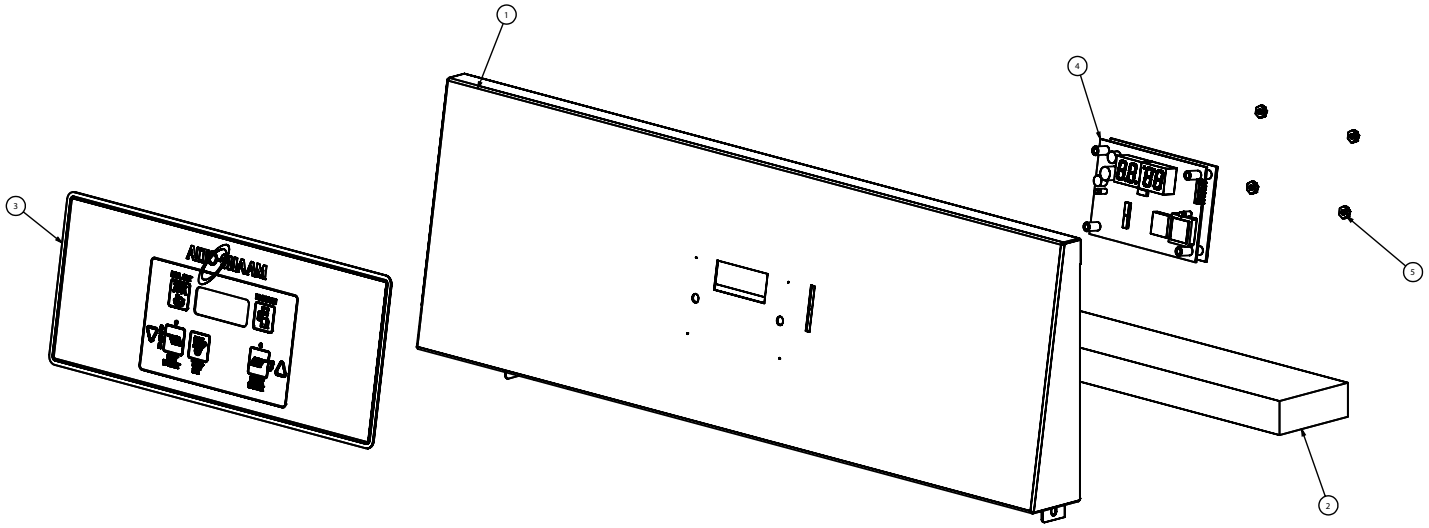
5009217 PANEL, LOWER ASSY

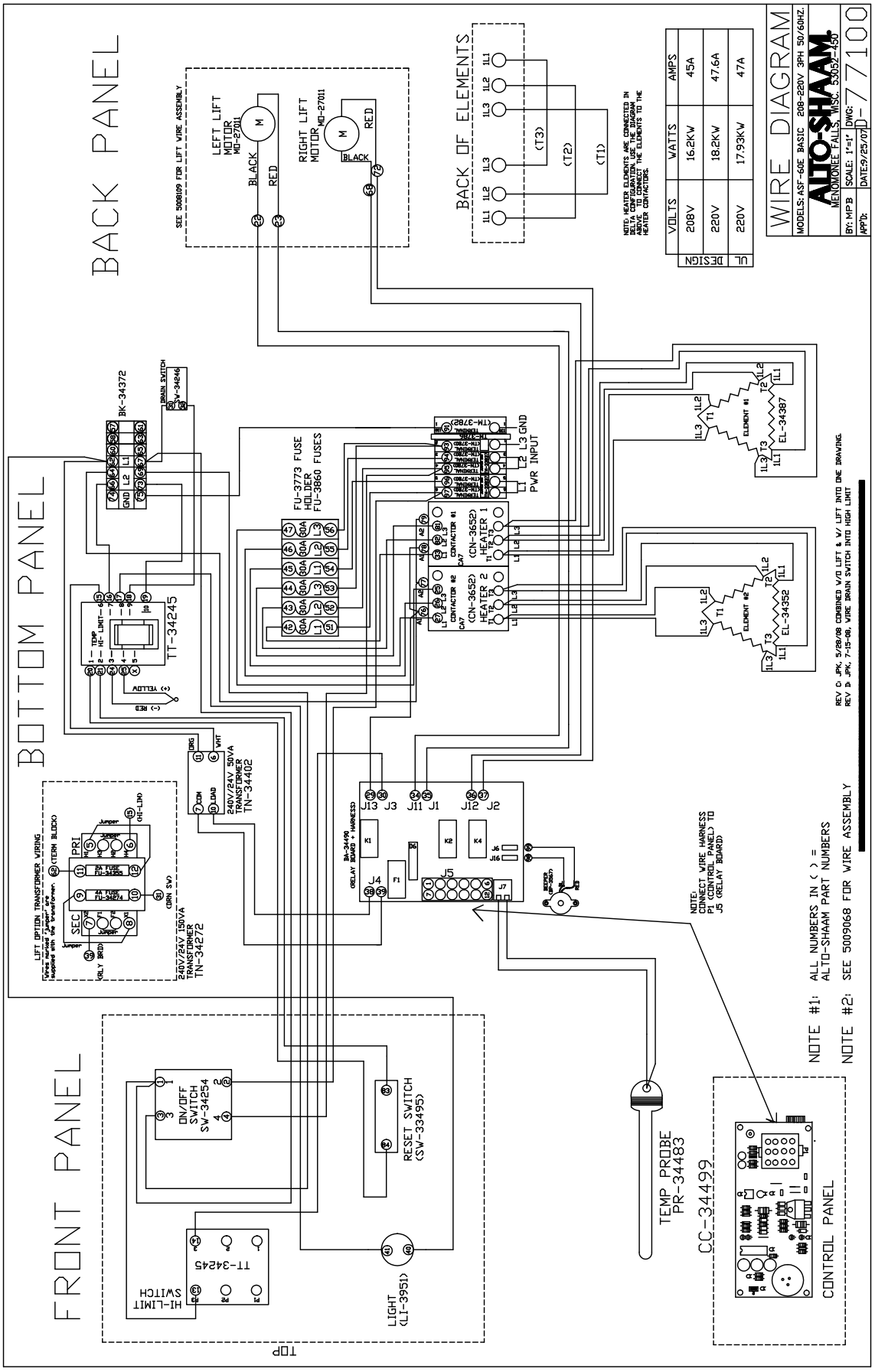
ITEM	PART NO	DESCRIPTION	QTY
1	1009947	PANEL, FRONT LOWER NO FILTER	1
2	TT-34245	THERMOSTAT, HI-LIMIT	1
3	SW-34254	SWITCH, CAM, FOR SINGLE PHASE	1
4	SC-22271	SCREWS,M4-0.7X6MM PHIL	2
5	LI-3951	WHITE PILOT LIGHT 250V	1
6	SW-33495	SWITCH-PUSH BUTTON SPST	2

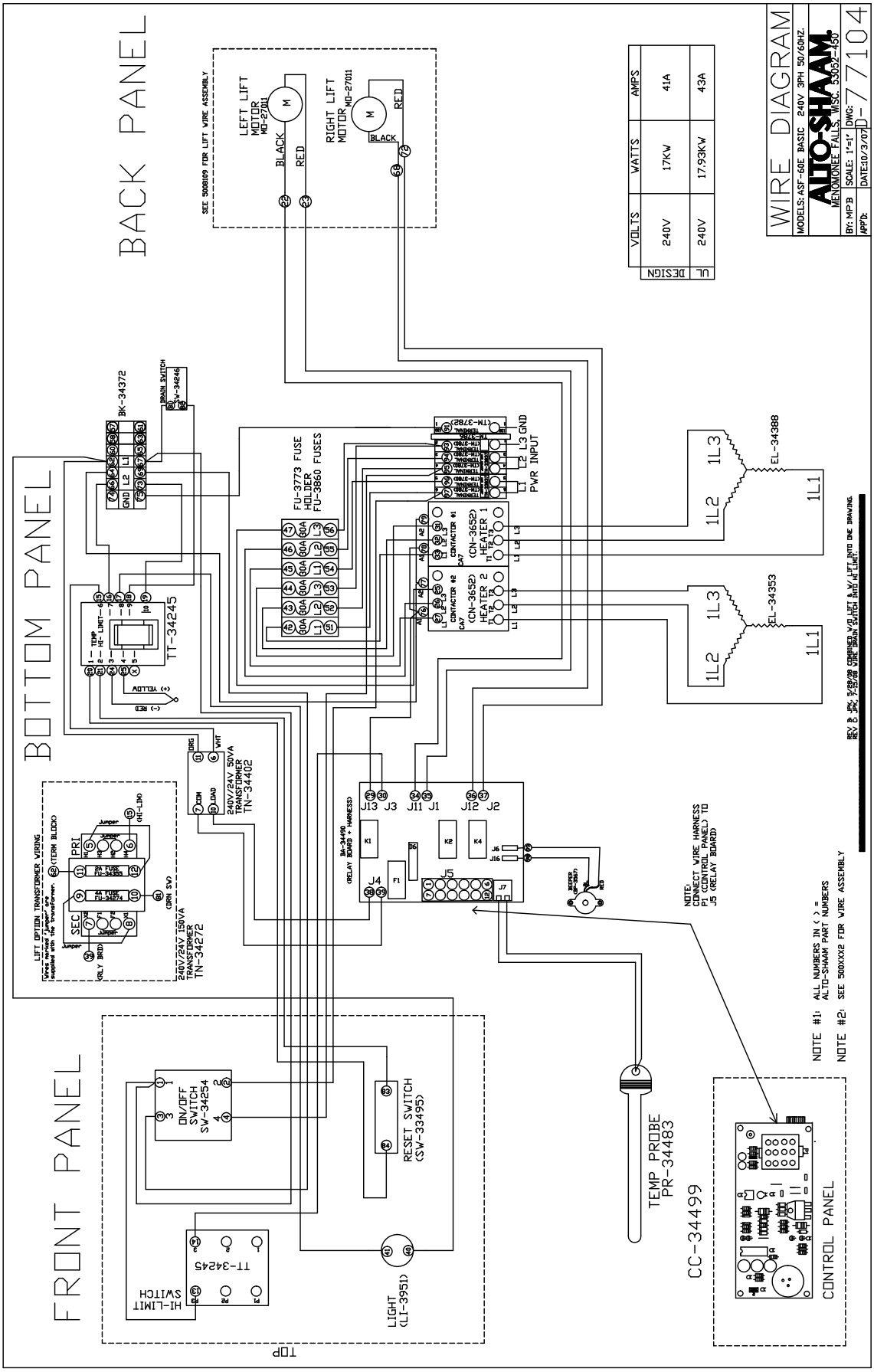


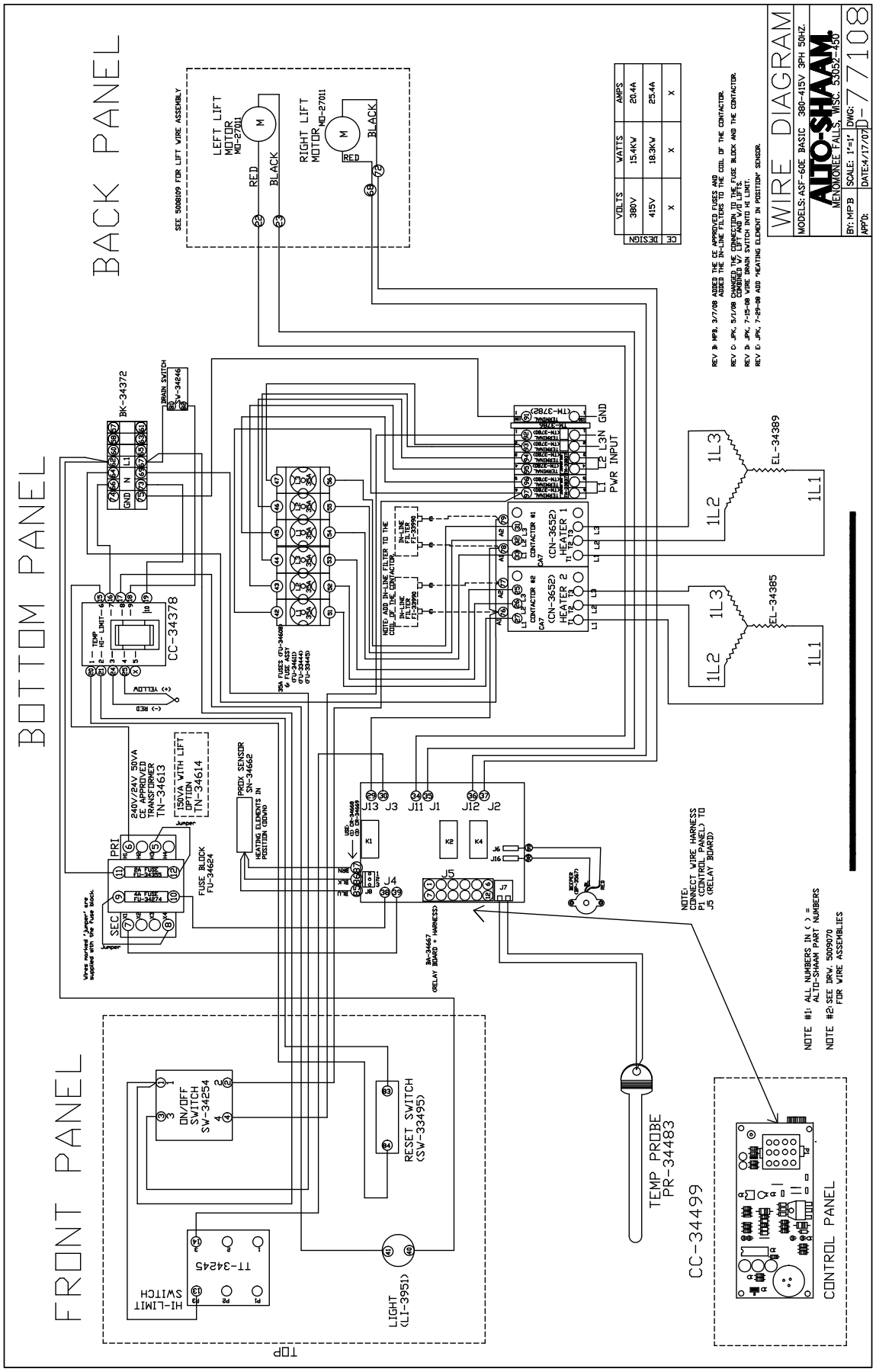
5009210 CONTROL PANEL

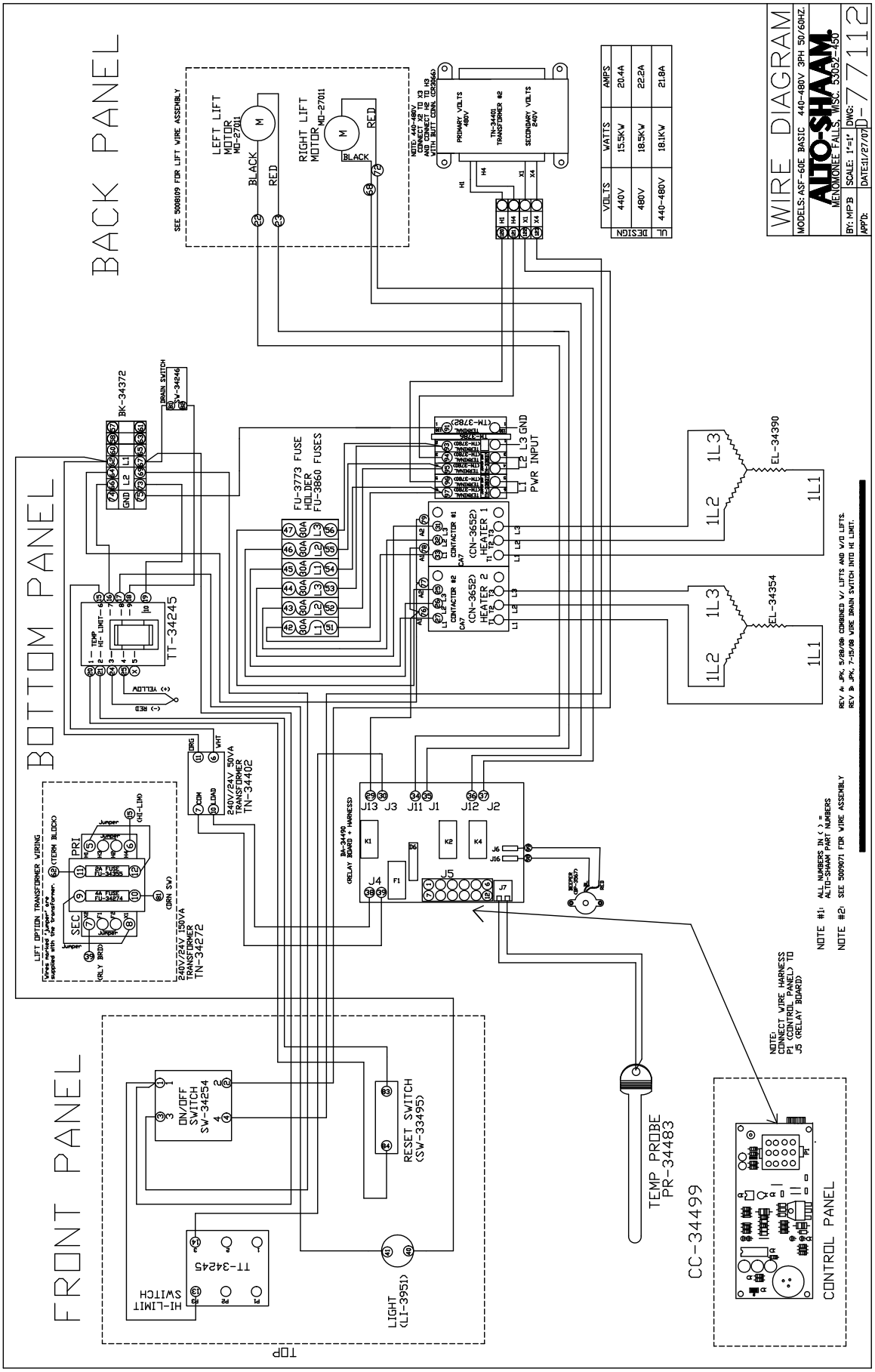
ITEM	PART NO	DESCRIPTION	QTY
1	5009212	WELDMENT-CONTROL PANEL, ASF-75 BSC	1
2	IN-22985	INSULATION, 1/2" CERAMIC WOOL	1
3	PE-28022	OVERLAY WITH MEMBRANE- NO LIFT	1
4	CC-34499	CONTROL-SIMPLE	1
5	NU-2361	NUT-# 6-32	4

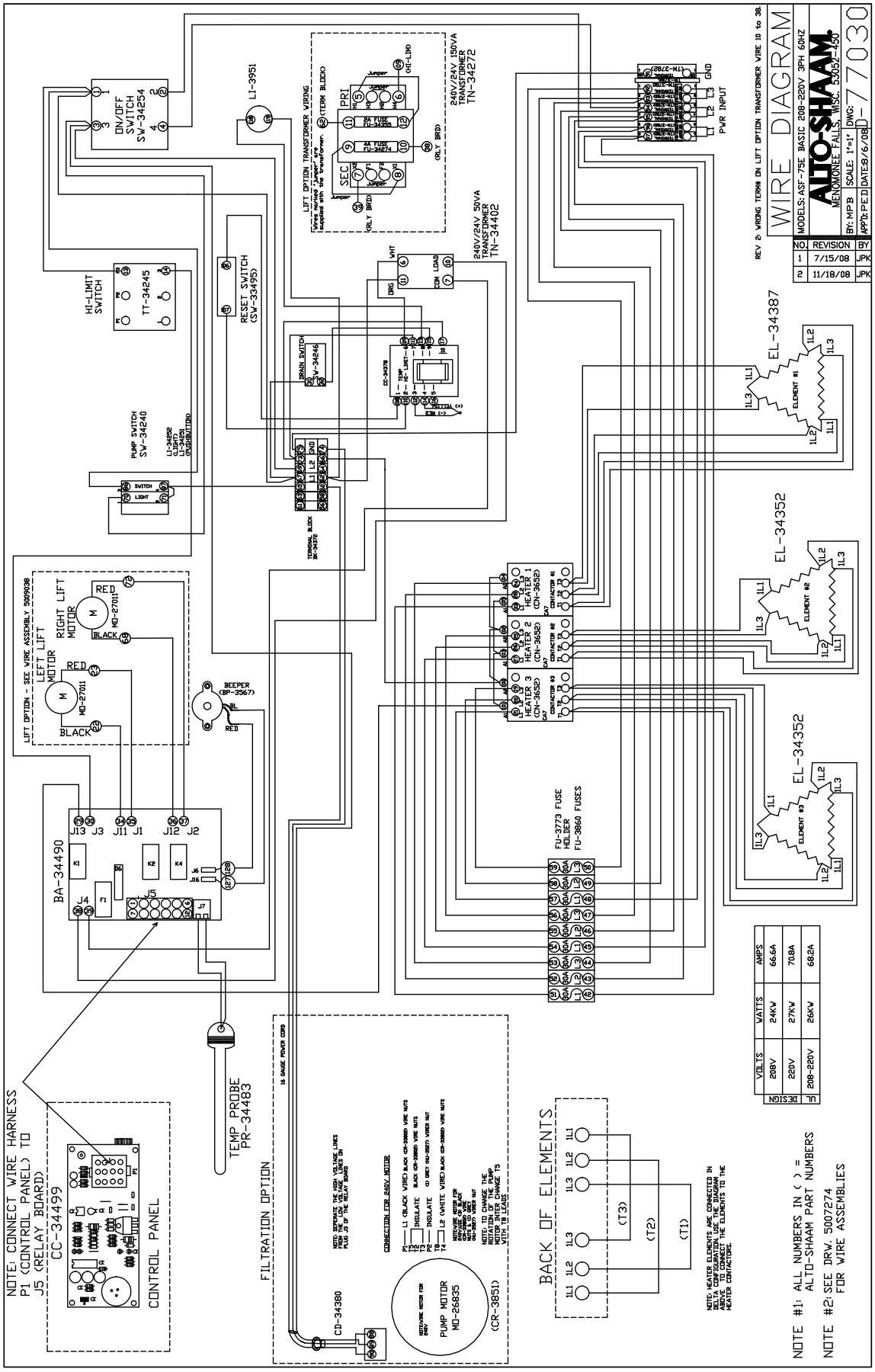


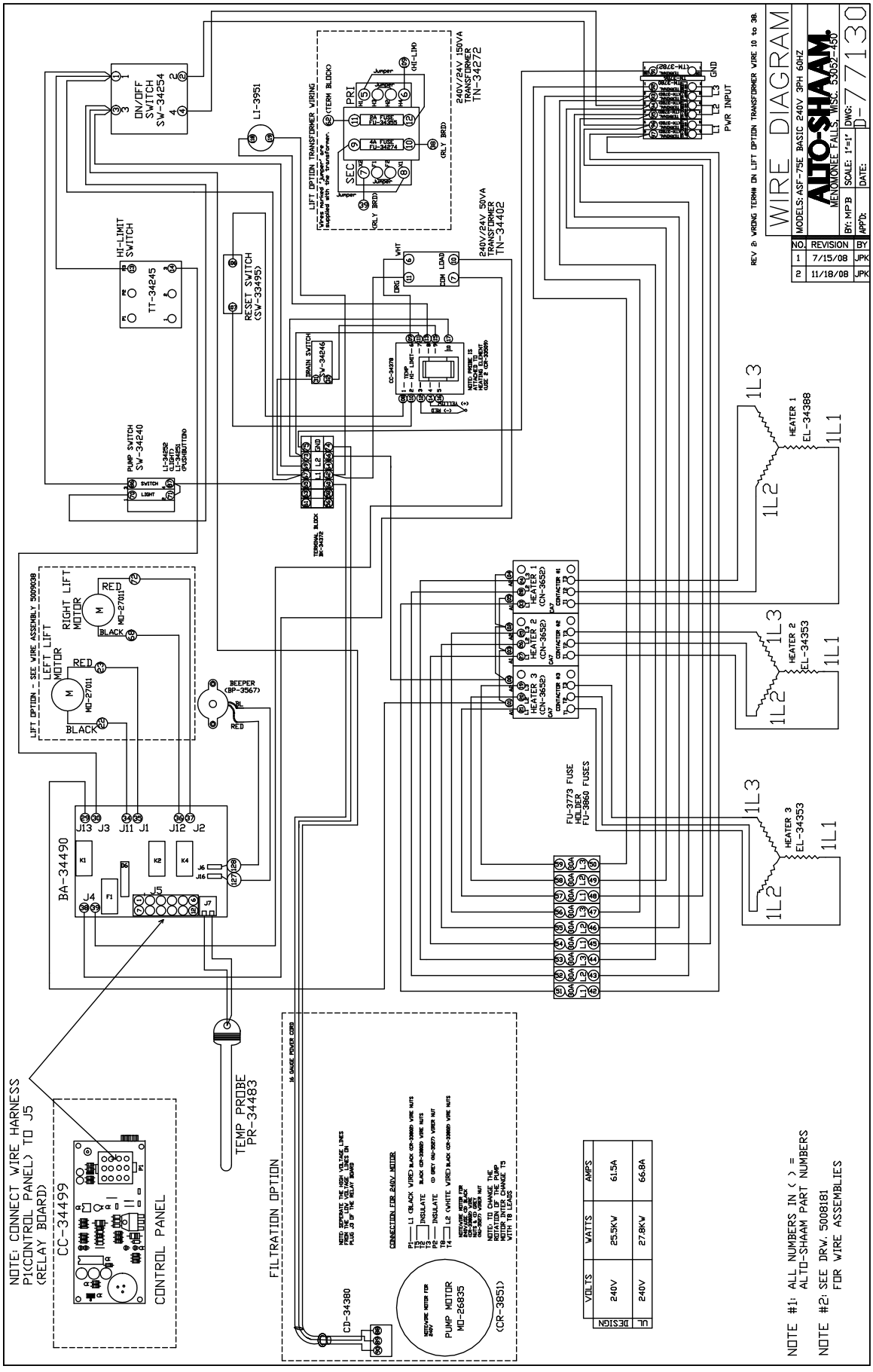

BACK PANEL
BOTTOM PANEL
FRONT PANEL
TOP
WIRE DIAGRAM
MODELS: ASF-60E BASIC 208-220V 3PH 50/60HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4904
BY: MPB
SCALE: 1"=1"
DWG: D-7100
APP'D:
DATE:9/25/07
VOLTS
WATTS
AMPS
DESIGN
UL
208V
16.2KW
45A
220V
18.2KW
47.6A
220V
17.93KW
47A
BACK OF ELEMENTS
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
BLACK
RED
SEE 5008109 FOR LIFT WIRE ASSEMBLY
BK-34372
DRAIN SWITCH SW-34246
TT-34245
TEMP HI-LIMIT
FU-3773 FUSE HOLDER
FU-3860 FUSES
60A
L1 L2 L3
PWR INPUT
CONTACTOR #1 (CN-3652)
CONTACTOR #2 (CN-3652)
HEATER 1
HEATER 2
ELEMENT #1 EL-34387
ELEMENT #2 EL-34352
240V/24V 50VA TRANSFORMER TN-34402
LIFT OPTION TRANSFORMER WIRING
240V/24V 150VA TRANSFORMER TN-34272
PRI
SEC
2A FUSE FU-34256
4A FUSE FU-34274
J13 J3 J11 J1 J12 J2
J4 J5
K1 K2 K4
F1
J6 J16 J7
BK-34499 (RELAY BOARD + HARNESS)
ON/OFF SWITCH SW-34254
RESET SWITCH (SW-33495)
HI-LIMIT SWITCH
TT-34245
LIGHT (LI-3951)
TEMP PROBE PR-34483
CC-34499
CONTROL PANEL
NOTE: CONNECT WIRE HARNESS P1 (CONTROL PANEL) TO J5 (RELAY BOARD)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE 5009068 FOR WIRE ASSEMBLY
REV C JPK, 5/28/08 COMBINED W/O LIFT & W/ LIFT INTO ONE DRAWING.
REV D JPK, 7-15-08, WIRE DRAIN SWITCH INTO HIGH LIMIT

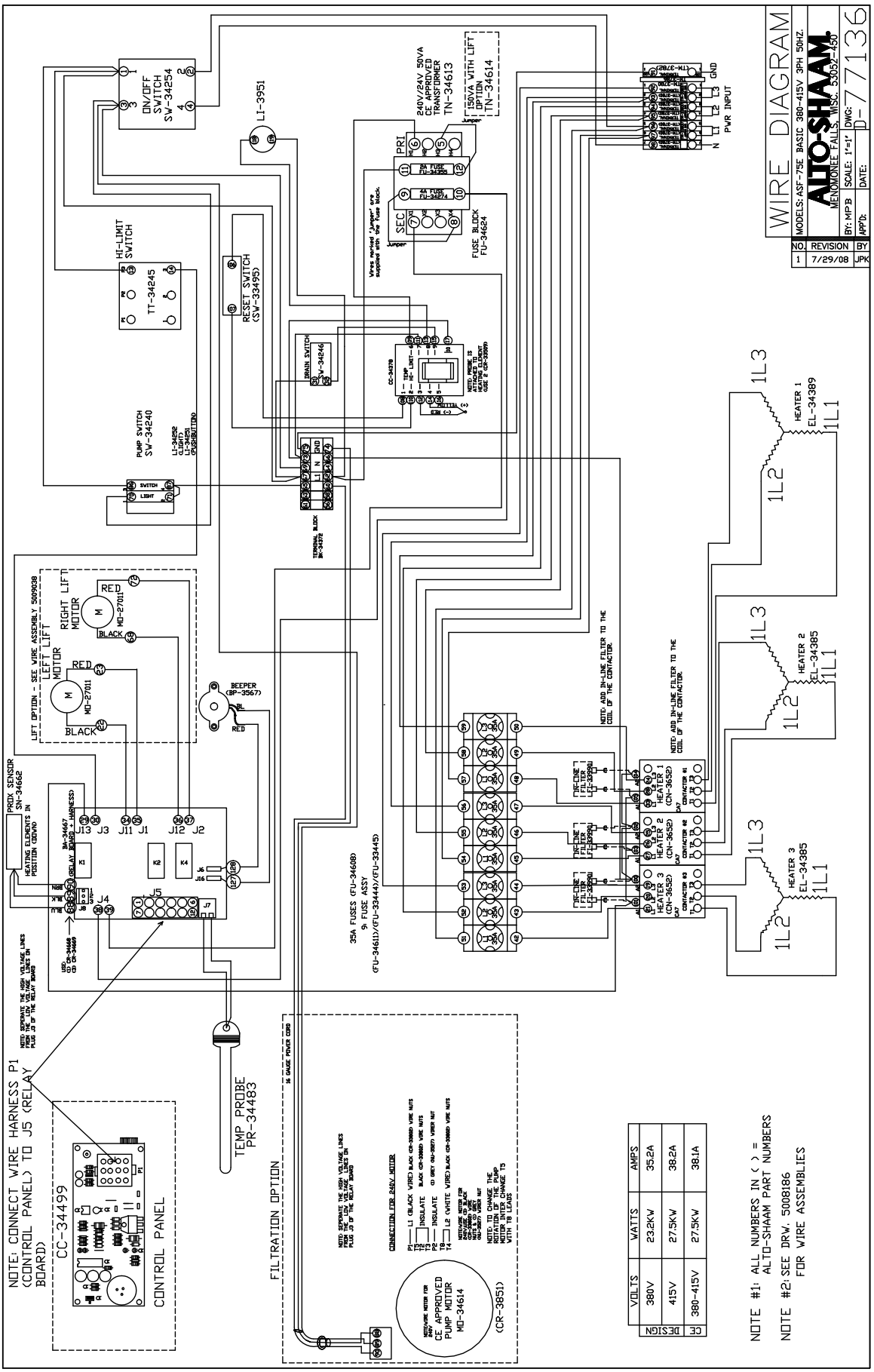

WIRE DIAGRAM
MODELS: ASF-60E BASIC 240V 3PH 50/60HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4501
BY: MPB
SCALE: 1"=1"
DWG:
APP'D:
DATE: 10/3/07
D-77104
DESIGN
UL
VOLTS
WATTS
AMPS
240V
17KW
41A
240V
17.93KW
43A
BACK PANEL
BOTTOM PANEL
FRONT PANEL
CONTROL PANEL
TOP
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
BLACK
RED
BLACK
RED
SEE 500809 FOR LIFT WIRE ASSEMBLY
BK-34372
DRAIN SWITCH
SW-34246
TT-34245
FU-3773 FUSE HOLDER
FU-3860 FUSES
TM-3782
L1
L2
L3 GND
PWR INPUT
(CN-3652) HEATER 1 CONTACTOR #1
(CN-3652) HEATER 2 CONTACTOR #2
EL-34388
EL-34353
1L1
1L2
1L3
240V/24V 50VA TRANSFORMER TN-34402
240V/24V 150VA TRANSFORMER TN-34272
LIFT OPTION TRANSFORMER WIRING
PRI
SEC
J13
J3
J11
J1
J12
J2
J4
J5
J6
J16
J7
K1
K2
K4
F1
D6
BK-34490
RELAY BOARD + HARNESS
BEEPER BP-3867
NOTE: CONNECT WIRE HARNESS P1 (CONTROL PANEL) TO J5 (RELAY BOARD)
TEMP PROBE PR-34483
CC-34499
ON/OFF SWITCH SW-34254
RESET SWITCH (SW-33495)
HI-LIMIT SWITCH
TT-34245
LIGHT (LI-3951)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE 500XXX2 FOR WIRE ASSEMBLY
REV B JPK 3/28/08 COMBINED V/D LIFT & V/ LIFT INTO ONE DRAWING.
REV A JPK 7-15-08 ADDED DRAIN SWITCH INTO "A" LIMIT.

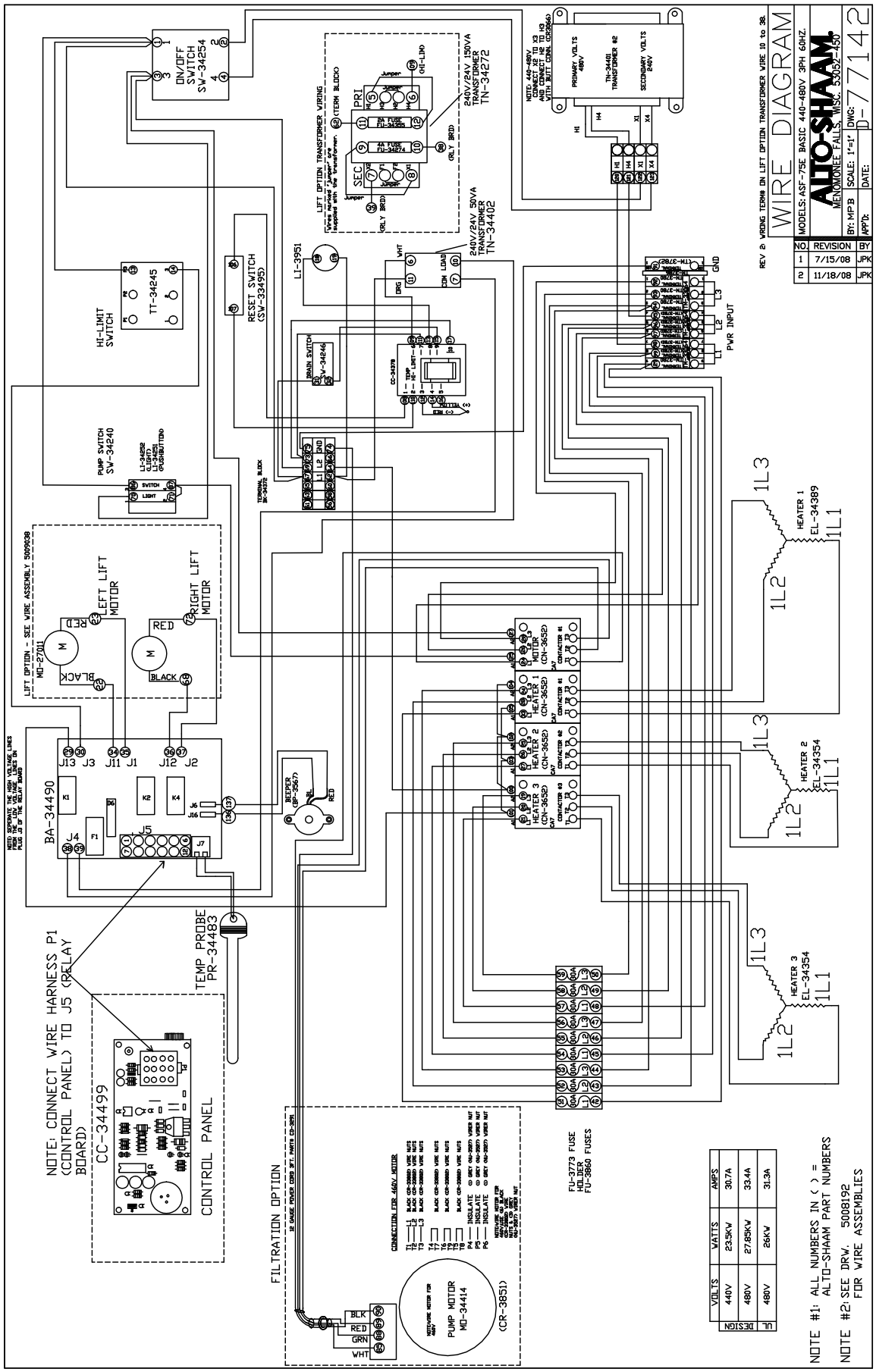

BACK PANEL
BOTTOM PANEL
FRONT PANEL
WIRE DIAGRAM
MODELS: ASF-60E BASIC 380-415V 3PH 50HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4505
DWG: D-77108
SCALE: 1"=1"
DATE: 4/17/07
BY: MPB
APP'D:
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
RED
BLACK
SEE 5008109 FOR LIFT WIRE ASSEMBLY
VOLTS | WATTS | AMPS
380V | 15.4KW | 20.4A
415V | 18.3KW | 25.4A
X | X | X
DESIGN
CE
REV B MPB, 3/7/08 ADDED THE CE APPROVED FUSES AND ADDED THE IN-LINE FILTERS TO THE COIL OF THE CONTACTOR.
REV C JPK, 5/1/08 CHANGED THE CONNECTION TO THE FUSE BLOCK AND THE CONTACTOR. COMBINED W/ LIFT AND W/O LIFTS.
REV D JPK, 7-15-08 WIRE DRAIN SWITCH INTO HI LIMIT.
REV E JPK, 7-29-08 ADD HEATING ELEMENT IN POSITION SENSOR.
BK-34372
DRAIN SWITCH SW-34246
CC-34378
TEMP HI-LIMIT
YELLOW
RED
240V/24V 50VA CE APPROVED TRANSFORMER TN-34613
150VA WITH LIFT OPTION TN-34614
PRI
SEC
4A FUSE FU-34369
4A FUSE FU-34674
FUSE BLOCK FU-34624
PROX SENSOR SN-34662
HEATING ELEMENTS IN POSITION 4 ONLY
IN-LINE FILTER FS-33998
CONTACTOR #1 (CN-3652) HEATER 1
CONTACTOR #2 (CN-3652) HEATER 2
(TN-3782)
L1 L2 L3N GND
PWR INPUT
EL-34389
EL-34385
1L1
1L2
1L3
J13 J3 J11 J1 J12 J2
J4
J5
J6 J16
J7
K1
K2
K4
SW-34467 (RELAY BOARD + HARNESS)
NOTE: CONNECT WIRE HARNESS P1 (CONTROL PANEL) TO J5 (RELAY BOARD)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2 SEE DRW. 5009070 FOR WIRE ASSEMBLIES
ON/OFF SWITCH SW-34254
RESET SWITCH (SW-33495)
HI-LIMIT SWITCH
TT-34245
LIGHT (LI-3951)
TEMP PROBE PR-34483
CC-34499
CONTROL PANEL
TOP


WIRE DIAGRAM
MODELS: ASF-60E BASIC 440-480V 3PH 50/60HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-450
BY: MPB
SCALE: 1"=1"
DWG: D-77112
APP'D:
DATE: 11/27/07
DESIGN
JL
VOLTS
AMPS
440V
15.5KW
20.4A
480V
18.5KW
22.2A
440-480V
18.1KW
21.9A
BACK PANEL
BOTTOM PANEL
FRONT PANEL
CONTROL PANEL
CC-34499
TOP
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
BLACK
RED
SEE 5008109 FOR LIFT WIRE ASSEMBLY
PRIMARY VOLTS 480V
SECONDARY VOLTS 240V
TN-34401 TRANSFORMER #2
BK-34372
DRAIN SWITCH SW-34246
FU-3773 FUSE HOLDER
FU-3860 FUSES
L1 L2 L3 GND
PWR INPUT
TT-34245
TEMP HI LIMIT
CONTACTOR #1 (CN-3652) HEATER 1 TE-3
CONTACTOR #2 (CN-3652) HEATER 2 TE-3
EL-34390
EL-34354
1L1
1L2
1L3
J13 J3 J11 J1 J12 J2
BA-34490 (RELAY BOARD + HARNESS)
K1 K2 K3 K4
J4 J5 J6 J7
J5 J6
BUZZER BZ-34260
LIFT OPTION TRANSFORMER WIRING
(TERM BLOCK)
PRI
SEC
4A FUSE FU-34274
2A FUSE FU-34350
(HI-LIMIT)
(RELAY BRD)
CONTROL SW)
240V/24V 150VA TRANSFORMER TN-34272
240V/24V 150VA TRANSFORMER TN-34402
TEMP PROBE PR-34483
RESET SWITCH (SW-33495)
ON/OFF SWITCH SW-34254
HI-LIMIT SWITCH
TT-34245
LIGHT (LI-3951)
NOTE: CONNECT WIRE HARNESS P1 (CONTROL PANEL) TO J5 (RELAY BOARD)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE 5009071 FOR WIRE ASSEMBLY
REV A- JPK, 5/28/09- CONNECT V/ LIFTS AND V/O LIFTS.
REV B- JPK, 7-15-09 WIRE DRAIN SWITCH INTO HI LIMIT.


WIRE DIAGRAM
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4501
MODELS: ASF-75E BASIC 208-220V 3PH 60HZ
SCALE: 1"=1"
DWG: 7030
DATE: 8/6/08
BY: MPB
APPD: PED
NO. REVISION BY
1 7/15/08 JPK
2 11/18/08 JPK
REV 2: WRING TERM# ON LIFT OPTION TRANSFORMER WIRE 10 to 38.
NOTE: CONNECT WIRE HARNESS P1 (CONTROL PANEL) TO J5 (RELAY BOARD)
CC-34499
CONTROL PANEL
BA-34490
TEMP PROBE PR-34483
FILTRATION OPTION
CD-34380
PUMP MOTOR MD-26835
(CR-3851)
BACK OF ELEMENTS
(T1)
(T2)
(T3)
EL-34387
EL-34352
EL-34352
ELEMENT #1
ELEMENT #2
ELEMENT #3
HEATER 1 (CN-36520)
HEATER 2 (CN-36520)
HEATER 3 (CN-36520)
CONTACTOR #1
CONTACTOR #2
CONTACTOR #3
FU-3773 FUSE HOLDER
FU-3860 FUSES
240V/24V 150VA TRANSFORMER TN-34272
240V/24V 50VA TRANSFORMER TN-34402
LIFT OPTION TRANSFORMER WIRING
(TERM BLOCK)
PRI
SEC
4A FUSE FU-34274
8A FUSE FU-34275
(HI-LIM)
(RLY BRD)
ON/OFF SWITCH SW-34254
HI-LIMIT SWITCH
TT-34245
RESET SWITCH (SW-33455)
DRAIN SWITCH SW-34246
PUMP SWITCH SW-34240
CC-34378
CON LOAD
PWR INPUT
LIFT OPTION - SEE WIRE ASSEMBLY 5009038
LEFT LIFT MOTOR
RIGHT LIFT MOTOR
MD-27011
BEEPER (BP-3567)
TERMINAL BLOCK TB-34248
VOLTS WATTS AMPS
208V 24KW 66.6A
220V 27KW 70.8A
208-220V 26KW 68.2A
DESIGN
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5007274 FOR WIRE ASSEMBLIES


WIRE DIAGRAM
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4904
MODELS: ASF-75E BASIC 240V 3PH 60HZ
SCALE: 1"=1"
DWG: D-77130
BY: MPB
DATE:
APP'D:
NO. REVISION BY
1 7/15/08 JPK
2 11/18/08 JPK
REV 2: WRONG TERMN ON LIFT OPTION TRANSFORMER WIRE 10 to 38.
NOTE: CONNECT WIRE HARNESS P1(CONTROL PANEL) TO J5 (RELAY BOARD)
CC-34499
CONTROL PANEL
TEMP PROBE PR-34483
FILTRATION OPTION
16 GAUGE POWER CORD
CD-34380
PUMP MOTOR MD-26835
(CR-3851)
CONNECTION FOR 240V MOTOR
P1— L1 (BLACK WIRE) BLACK (CR-33880) WIRE NUTS
T3 T2 INSULATE BLACK (CR-33880) WIRE NUTS
T1 INSULATE (2 GREY (CR-3527) WIRE NUT
T4 L2 (WHITE WIRE) BLACK (CR-33880) WIRE NUTS
NOTE: TO CHANGE THE ROTATION OF THE PUMP MOTOR, INTERCHANGE T3 WITH T2 LEADS
NOTE: REMOVE THE HIGH VOLTAGE LINKS FROM J3 AND J4 ON THE RELAY BOARD
VOLTS WATTS AMPS
DESIGN
240V 2.55KW 61.5A
UL
240V 2.78KW 66.8A
BA-34490
J13 J3 J11 J1 J12 J2 J4 J5 J6 J16 J7
K1 K2 K3 K4
F1
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
RED BLACK
LIFT OPTION - SEE WIRE ASSEMBLY 5009038
BEEPER (BP-3567)
BL RED
HI-LIMIT SWITCH
TT-34245
RESET SWITCH (SW-33495)
PUMP SWITCH SW-34240
SWITCH LIGHT
LI-34252 (LIGHT) LI-34121 (PUSHBUTTON)
LI-3951
DIN/OFF SWITCH SW-34254
DRAIN SWITCH SW-34246
TERMINAL BLOCK BK-34372
CC-34378
TEMP PC MNT
NOTE: PROBE IS INTERNAL TO HEATING ELEMENT USE # CR-33880
240V/24V 150VA TRANSFORMER TN-34272
240V/24V 50VA TRANSFORMER TN-34402
LIFT OPTION TRANSFORMER WIRING
Wires marked "Jumper" are required when this transformer is used.
(TERM BLOCK)
PRI SEC
4A FUSE FU-34274
(RLY BRD)
Jumper
(HI-LIM)
VHT DRG CON LOAD
PWR INPUT
L1 L2 L3 GND
FU-3773 FUSE HOLDER FU-3860 FUSES
HEATER 1 CONTACTOR #1 (CN-36520)
HEATER 2 CONTACTOR #2 (CN-36520)
HEATER 3 CONTACTOR #3 (CN-36520)
HEATER 1 EL-34388
HEATER 2 EL-34353
HEATER 3 EL-34353
1L1 1L2 1L3
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5008181 FOR WIRE ASSEMBLIES


WIRE DIAGRAM
MODELS: ASF-75E BASIC 380-415V 3PH 50HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4550
BY: MP/B
SCALE: 1"=1"
DWG: D-77136
APP'D:
DATE:
NO. REVISION BY
1 7/29/08 JPK
ON/OFF SWITCH SW-34254
HI-LIMIT SWITCH TT-34245
RESET SWITCH (SW-33495)
LI-3951
240V/24V 50VA CE APPROVED TRANSFORMER TN-34613
150VA WITH LIFT OPTION TN-34614
FUSE BLOCK FU-34624
PWR INPUT
DRAIN SWITCH SW-34246
PUMP SWITCH SW-34240
LIFT OPTION - SEE WIRE ASSEMBLY 5009058
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
BEEPER (BP-3567)
PROX SENSOR SW-34662
HEATING ELEMENTS IN POSITION (3)(4)(5)
RELAY BOARD 34667 (HARNESS)
J13 J3 J11 J1 J12 J2
J4 J5 J7 J6 J16
K1 K2 K4
35A FUSES (FU-34608) 9, FUSE ASSY (FU-34611)/(FU-33444)/(FU-33445)
NOTE: ADD IN-LINE FILTER TO THE COIL OF THE CONTACTOR.
HEATER 1 EL-34389
HEATER 2 EL-34385
HEATER 3 EL-34385
1L1 1L2 1L3
NOTE: CONNECT WIRE HARNESS P1 (CONTROL PANEL) TO J5 (RELAY BOARD)
CC-34499
CONTROL PANEL
TEMP PROBE PR-34483
FILTRATION OPTION
16 GAUGE POWER CORD
CONNECTION FOR 240V MOTOR
CE APPROVED PUMP MOTOR MD-34614
(CR-3851)
VOLTS WATTS AMPS
380V 23.2KW 35.2A
415V 27.5KW 38.2A
380-415V 27.5KW 38.1A
DESIGN CE
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5008186 FOR WIRE ASSEMBLIES


WIRE DIAGRAM
MODELS: ASF-75E BASIC 440-480V 3PH 60HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4501
BY: MP B
SCALE: 1"=1"
DWG: D-77142
DATE:
APP'D:
NO. REVISION BY
1 7/15/08 JPK
2 11/18/08 JPK
REV 2: WIRING TERM# ON LIFT OPTION TRANSFORMER WIRE 10 to 38.
ON/OFF SWITCH SW-34254
HI-LIMIT SWITCH TT-34245
RESET SWITCH (SW-34459)
LI-3951
240V/24V 150VA TRANSFORMER TN-34272
240V/24V 50VA TRANSFORMER TN-34402
TN-34401 TRANSFORMER #2
PRIMARY VOLTS 480V
SECONDARY VOLTS 240V
PWR INPUT
L1 L2 L3 GND
DRAIN SWITCH SW-34246
PUMP SWITCH SW-34240
TERMINAL BLOCK BK-34372
LIFT OPTION - SEE WIRE ASSEMBLY 5009039
LEFT LIFT MOTOR MD-27041
RIGHT LIFT MOTOR
RED
BLACK
BA-34490
J13 J3 J11 J1 J12 J2 J4 J5 J6 J16 J7
BEEPER (BP-3567)
TEMP PROBE PR-34483
NOTE: CONNECT WIRE HARNESS P1 (CONTROL PANEL) TO J5 (RELAY BOARD)
CC-34499
CONTROL PANEL
FILTRATION OPTION
PUMP MOTOR MD-34414
(CR-3851)
BLK
RED
GRN
WHT
HEATER 1 EL-34389
HEATER 2 EL-34354
HEATER 3 EL-34354
1L1
1L2
1L3
MOTOR (CN-3652)
HEATER 1 (CN-3652)
HEATER 2 (CN-3652)
HEATER 3 (CN-3652)
CONTACTOR #1
CONTACTOR #2
CONTACTOR #3
FU-3773 FUSE
FU-3860 FUSES
VOLTS VATTS AMPS
440V 23.5KW 30.7A
480V 27.85KW 33.4A
480V 26KW 31.3A
DESIGN UL
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5008192 FOR WIRE ASSEMBLIES

TRANSPORTATION DAMAGE and CLAIMS

All Alto-Shaam equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.
3. Note all damage to packages directly on the carrier's delivery receipt.
4. Make certain the driver signs this receipt. If he refuses to sign, make a notation of this refusal on the receipt.
5. If the driver refuses to allow inspection, write the following on the delivery receipt:
   Driver refuses to allow inspection of containers for visible damage.
6. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of the time, date, and the person called.
7. Save any packages and packing material for further inspection by the carrier.
8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser only that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

The parts warranty period is as follows:

For the refrigeration compressor on Alto-Shaam Quickchillers™, five (5) years from the date of installation.

For the heating element on Halo Heat® cooking and holding ovens, as long as the original purchaser owns the oven. This excludes holding only equipment.

For all other parts, one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

The labor warranty period is one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

Alto-Shaam will bear normal labor charges performed during standard business hours, excluding overtime, holiday rates or any additional fees.

To be valid, a warranty claim must be asserted during the applicable warranty period. This warranty is not transferable.

THIS WARRANTY DOES NOT APPLY TO:

1. Calibration.
2. Replacement of light bulbs, door gaskets, and/or the replacement of glass due to damage of any kind.
3. Equipment damage caused by accident, shipping, improper installation or alteration.
4. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions, including but not limited to, equipment subjected to harsh or inappropriate chemicals, including but not limited to, compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers.
5. Damage incurred as a direct result of poor water quality, inadequate maintenance of steam generators and/or surfaces affected by water quality. Water quality and required maintenance of steam generating equipment is the responsibility of the owner/operator.
6. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Cleaner, including but not limited to damage due to chlorine or other harmful chemicals. **Use of Alto-Shaam's Combitherm® Cleaner on Combitherm® ovens is highly recommended.**
7. Any losses or damage resulting from malfunction, including loss of product, food product, revenue, or consequential or incidental damages of any kind.
8. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

This warranty is exclusive and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Alto-Shaam be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, special, incidental, or consequential damages. No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.

ALTO-SHAAM®

Effective November 1, 2011

RECORD THE MODEL AND SERIAL NUMBER OF THE APPLIANCE FOR EASY REFERENCE.
ALWAYS REFER TO BOTH MODEL AND SERIAL NUMBER IN ANY CONTACT WITH ALTO-SHAAM REGARDING THIS APPLIANCE.

Model: _____ Date Installed: _____
Voltage: _____ Purchased From: _____
Serial Number: _____

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